Some Schools Examinations **?** on **Geometry**

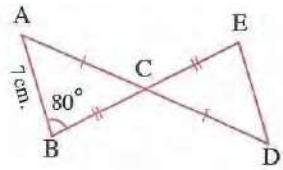**1** **Cairo Governorate**

El-Nouzha Educ. Admin
ST.George's College

Answer the following questions :

1 Choose the correct answer :

1 If the perimeter of a square is 28 cm. , then its area is ·············· cm.^{2}

(a) 8   (b) 4   (c) 49   (d) 36

2 If L_1 , L_2 and L_3 are coplanar straight lines , $L_1 \perp L_3$, $L_2 \perp L_3$, then L_1 ·············· L_2

(a) is perpendicular to   (b) parallels

(c) coincides   (d) intersects

3 If m ($\angle$ X) = 4 m ($\angle$ Y) and $\angle$ X , $\angle$ Y are supplementary angles , then m ($\angle$ X) = ··············

(a) 36°   (b) 180°   (c) 144°   (d) 135°

4 If $\triangle$ ABC $\equiv$ $\triangle$ XYZ , m ($\angle$ A) = 50° , m ($\angle$ B) = 70° , then m ($\angle$ Z) = ··············

(a) 50°   (b) 60°   (c) 70°   (d) 120°

5 If two straight lines intersect , then each two ·············· angles are equal in measure.

(a) vertically opposite   (b) adjacent

(c) alternate   (d) corresponding

6 The number of parallelograms in the figure ⬡ equals ··············

(a) 6   (b) 7   (c) 8   (d) 9

2 Complete each of the following :

1 The measure of the straight angle equals ·············· °

2 The sum of the measures of the accumulative angles at a point is ·············· °

3 If $\overline{AB} \equiv \overline{DE}$, then AB − DE = ··············

4 If m ($\angle$ A) = 140° , then m (reflex $\angle$ A) = ··············°

5 Two right-angled triangles are congruent if ··············

6 The angle of measure ·············· complements an angle of measure 25°

3 [a] **In the opposite figure :**

$\overrightarrow{AD} \cap \overrightarrow{BE} = \{C\}$, AC = CD , BC = CE

, AB = 7 cm. , m ($\angle$ B) = 80°
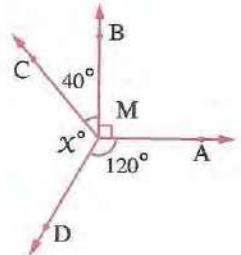
[1] Is $\triangle$ ABC $\equiv$ $\triangle$ DEC ? Why ?

[2] **Find :** the length of $\overline{ED}$, m ($\angle$ E)
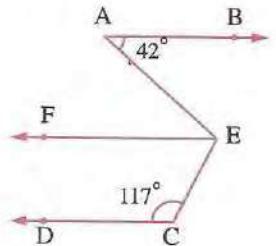
[b] **In the opposite figure :**

Find : the value of X

4 [a] **In the opposite figure :**

$\overrightarrow{AB} \parallel \overrightarrow{CD}$, $\overrightarrow{EF} \parallel \overrightarrow{CD}$

, m ($\angle$ A) = 42°

and m ($\angle$ C) = 117°

Find : m ($\angle$ AEC)
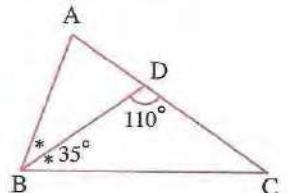
[b] **In the opposite figure :**

$\overrightarrow{BD}$ bisects $\angle$ ABC

, m ($\angle$ DBC) = 35°

, m ($\angle$ BDC) = 110°

Find by steps : m ($\angle$ C) and m ($\angle$ A)
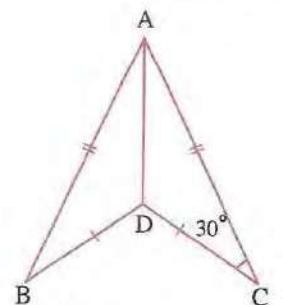
5 [a] **In the opposite figure :**

Write the conditions for the triangles

ADC and ADB to be congruent.

If m ($\angle$ C) = 30°

, **find :** m ($\angle$ B)
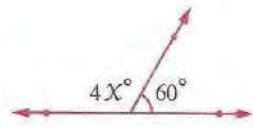
[b] Draw the angle ABC of measure 100° , then bisect it (Don't remove the arcs).

2	Cairo Governorate		East Nasr City Educational Directorate Al-Ahram Language School

Answer the following questions :

1 **Choose the correct answer :**

1. If m $(\angle A) = 130°$, then m (reflex $\angle A$) = ...

   (a) $90°$ (b) $130°$ (c) $285°$ (d) $230°$

2. The two adjacent angles formed by intersecting of a straight line and a ray with a starting point on this straight line are ....

   (a) complementary.   (b) alternate.   (c) supplementary.   (d) vertically opposite.

3. The sum of measures of the accumulative angles at a point equals ....

   (a) $180°$ (b) $90°$ (c) $360°$ (d) $120°$

4. The angle of measure $179°$ is .... angle.

   (a) an obtuse   (b) a right   (c) a reflex   (d) a straight

5. The right angle complements .... angle.

   (a) an acute   (b) an obtuse   (c) a zero   (d) a right

6. **In the opposite figure :**

   The value of X = ...

   (a) $10°$ (b) $20°$

   (c) $30°$ (d) $60°$

   $4X°$ $60°$

2 **Complete the following :**

1. If $\overline{AB} \equiv \overline{XY}$, then AB − XY = ...

2. The angle whose measure is $40°$ supplements an angle of measure ....°

3. If a straight line cuts two parallel straight lines , then each two corresponding angles are ....

4. If two adjacent angles are complementary , then their outer sides are ....

5. Two triangles are congruent if two sides and the .... angle of one of them are congruent to their corresponding parts of the other.

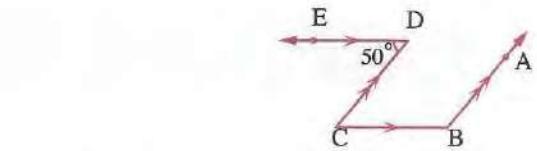6. If two straight lines are parallel to a third straight line , then they are ....

3 **[a]** **In the opposite figure :**

$\overrightarrow{BA} // \overleftrightarrow{CD}$, $\overleftrightarrow{CB} // \overrightarrow{DE}$

, m (∠ D) = 50°

Find : **1** m (∠ C)   **2** m (∠ B)
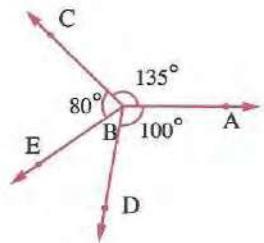
[b] **In the opposite figure :**

m (∠ ABC) = 135°

, m (∠ CBE) = 80°

, m (∠ ABD) = 100°

Find : m (∠ EBD)

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4 **[a]** **In the opposite figure :**
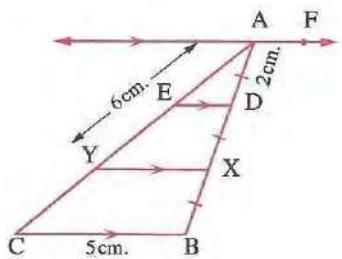
$\overleftrightarrow{AF} // \overline{DE} // \overline{XY} // \overline{BC}$

, AD = DX = XB = 2 cm.

, AY = 6 cm. , CB = 5 cm.

Find : **1** The length of $\overline{AC}$

          2 The perimeter of the triangle ABC
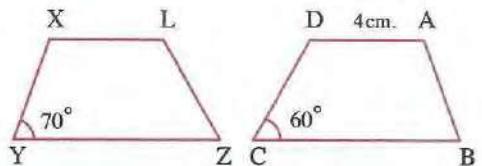
[b] **In the opposite figure :**

The polygon ABCD ≡ the polygon XYZL

Find : **1** The length of $\overline{LX}$

          2 m (∠ B)

          3 m (∠ Z)

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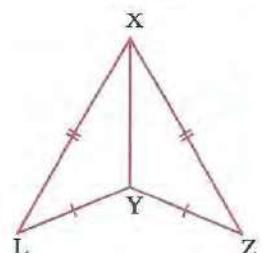
5 **[a]** **In the opposite figure :**

XL = XZ

and YL = YZ

Prove that : △ XYL is congruent to △ XYZ

Mention the case used.

[b] By using your geometric instruments , draw ∠ ABC whose measure is 100°

Draw $\overrightarrow{BF}$ to bisect ∠ B (Don't remove the arcs).

3 | Giza Governorate | El-Haram Directorate Maths Supervision

Answer the following questions :

1 Choose the correct answer :
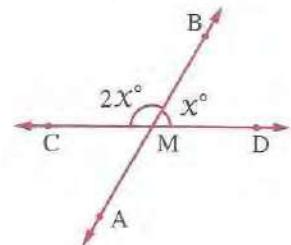
1. The measure of the supplementary of the angle whose measure is 40° is ⋯⋯⋯⋯

   (a) 50°   (b) 140°   (c) 180°   (d) 90°

2. The perimeter of the rhombus whose side length is 10 cm. equals ⋯⋯⋯⋯ cm.

   (a) 100   (b) 40   (c) 20   (d) 50

3. If $\triangle ABC \equiv \triangle XYZ$, $m (\angle X) + m (\angle Y) = 150°$, then $m (\angle C) = $ ⋯⋯⋯⋯

   (a) 75°   (b) 30°   (c) 100°   (d) 50°

4. If $m (\angle A) = 80°$, then m (reflex $\angle A$) = ⋯⋯⋯⋯

   (a) 360°   (b) 280°   (c) 90°   (d) 180°

5. If two straight lines are perpendicular to a third in the same plane , then these two straight lines are ⋯⋯⋯⋯

   (a) perpendicular.   (b) parallel.   (c) intersecting.   (d) coincident.

6. In the opposite figure :

   If $\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$

   , then $m (\angle AMC) = $ ⋯⋯⋯⋯

   (a) 30°   (b) 60°

   (c) 20°   (d) 120°

2 Complete the following :

1. If a straight line intersects two parallel straight lines , then each two alternate angles are ⋯⋯⋯⋯

2. If $\angle A \equiv \angle B$ and $\angle A$ supplements $\angle B$, then $m (\angle B) = $ ⋯⋯⋯⋯°

3. The sum of measures of the accumulative angles at a point equals ⋯⋯⋯⋯°

4. Two triangles are congruent if each ⋯⋯⋯⋯ is congruent to its corresponding part of the other triangle.

5. ABCD is a parallelogram , $m (\angle A) = 55°$, then $m (\angle B) = $ ⋯⋯⋯⋯°

6. The complementary of an angle of measure 55° is an angle of measure ⋯⋯⋯⋯°

3 [a] Draw an angle of measure 120° and bisect it. (Don't remove the arcs).
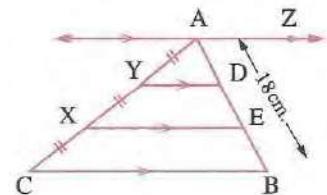
[b] **In the opposite figure :**

$\overleftrightarrow{AZ} \mathbin{/\!/} \overline{YD} \mathbin{/\!/} \overline{XE} \mathbin{/\!/} \overline{CB}$

, AY = YX = XC

, AB = 18 cm.

Find : the length of $\overline{AE}$

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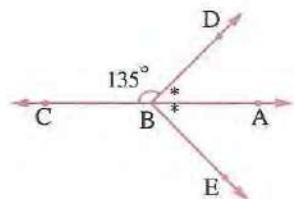
4 [a] **In the opposite figure :**

If $B \in \overleftrightarrow{AC}$

, m (∠ DBC) = 135°

, $\overrightarrow{BA}$ bisects ∠ DBE

, **find :** m (∠ ABD) and m (∠ DBE) (Give reasons).
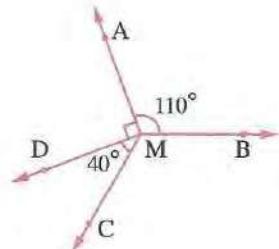
[b] **In the opposite figure :**

m (∠ DMA) = 90°

, m (∠ DMC) = 40°

, m (∠ AMB) = 110°

Find : m (∠ CMB)

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5 [a] **In the opposite figure :**
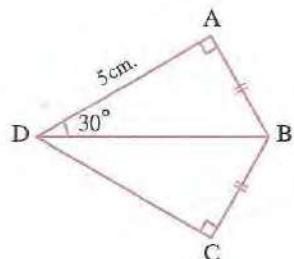
m (∠ A) = m (∠ C) = 90°

, AB = BC , AD = 5 cm.

, m (∠ ADB) = 30°

Is △ ABD ≡ △ CBD ?

Find : the length of $\overline{CD}$, m (∠ CBD)

[b] **In the opposite figure :**
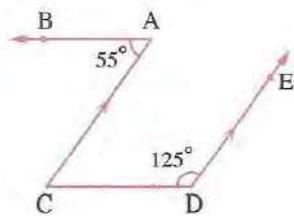
If $\overrightarrow{DE} \mathbin{/\!/} \overline{CA}$

, m (∠ D) = 125°

, m (∠ A) = 55°

, **find :** m (∠ C)

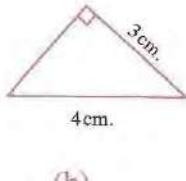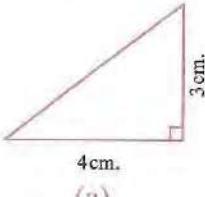Is $\overrightarrow{AB} \mathbin{/\!/} \overline{DC}$? (Give reasons).
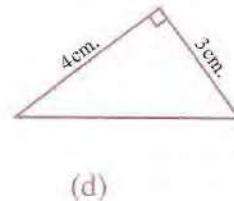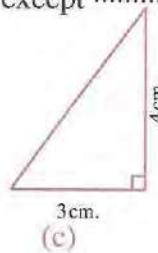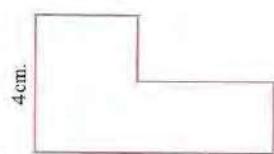
4 | **Giza Governorate** | Abou El-Nomros Educational Zone

Answer the following questions :

1 Choose the correct answer :

1 If $\overrightarrow{BA} \perp \overrightarrow{BC}$, then m $(\angle ABC) =$ ⋯⋯⋯⋯

(a) 40°   (b) 90°   (c) 180°   (d) 360°

2 The best unit to measure the area of a room is ⋯⋯⋯⋯

(a) mm^2 (b) cm^2 (c) m^2 (d) km^2

3 If m $(\angle A) = 50°$, then m (reflex $\angle A$) = ⋯⋯⋯⋯

(a) 40°   (b) 130°   (c) 310°   (d) 180°

4 If $\overline{AB} \equiv \overline{XY}$, then 5 AB − 5 XY = ⋯⋯⋯⋯

(a) zero   (b) 1   (c) 2   (d) 5

5 If L_1 and L_2 are two coplanar straight lines where $L_1 \cap L_2 = \varnothing$, then L_1 and L_2 are ⋯⋯⋯⋯

(a) intersecting.   (b) perpendicular.   (c) parallel.   (d) coincident.

6 The following triangles are congruent except ⋯⋯⋯⋯

(a)   (b)   (c)   (d)

2 Complete :

1 The two complementary angles are the two angles whose sum of measures is ⋯⋯⋯⋯°

2 If $\triangle ABC \equiv \triangle XYZ$ and m $(\angle A)$ + m $(\angle B) = 120°$, then m $(\angle Z) =$ ⋯⋯⋯⋯°

3 The area of the square of side length 4 cm. equals ⋯⋯⋯⋯ cm^2

4 If a straight line cuts two parallel straight lines , then each two alternate angles are ⋯⋯⋯⋯

5 The perimeter of the opposite figure is ⋯⋯⋯⋯ cm.

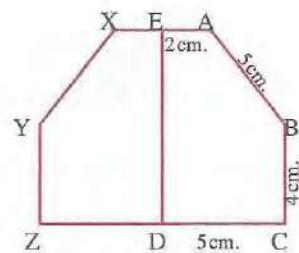**6** If $\triangle ABC \equiv \triangle XYZ$, the perimeter of $\triangle ABC = 12$ cm. , XY = 4 cm. and YZ = 5 cm. , then AC = ⋯⋯⋯⋯

3 [a] In the opposite figure :

$D \in \overline{CZ}$, the figure ABCDE ≡ the figure XYZDE

, AE = 2 cm. , BC = 4 cm.

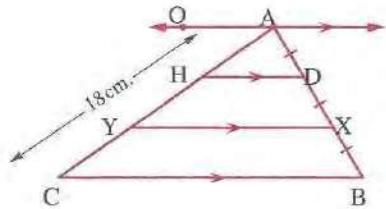and AB = CD = 5 cm.

Find : the perimeter of the figure ABCZYX

[b] In the opposite figure :

$\overleftrightarrow{AO}$ // $\overline{HD}$ // $\overline{YX}$ // $\overline{CB}$

, AD = DX = XB

and AC = 18 cm.

Find : the length of $\overline{AY}$

4 [a] In the opposite figure :
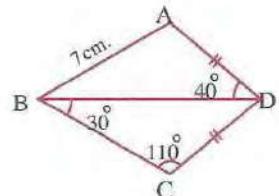
AD = DC , m (∠ ADB) = 40° , m (∠ DBC) = 30°

, m (∠ BCD) = 110° and AB = 7 cm.

[1] **Prove that** : △ ADB ≡ △ CDB

[2] **Find** : the length of $\overline{BC}$

[3] **Find** : m (∠ BAD) (Show your steps)

[b] In the opposite figure :

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$
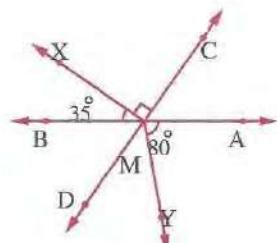
, m (∠ CMX) = 90°

, m (∠ XMB) = 35° and m (∠ AMY) = 80°

Find : [1] m (∠ AMC)   [2] m (∠ DMY)

[3] m (∠ BMY)

5 [a] Using the ruler and the compasses , draw the line segment $\overline{BC}$ of length 7 cm.

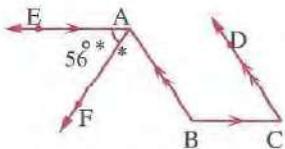, then draw the straight line L as an axis of symmetry of it. (Don't remove the arcs).

[b] In the opposite figure :

$\overrightarrow{AE}$ // $\overrightarrow{CB}$, $\overrightarrow{BA}$ // $\overrightarrow{CD}$

, $\overrightarrow{AF}$ bisects ∠ BAE and m (∠ EAF) = 56°

Find : [1] m (∠ B)   [2] m (∠ C) (Show your steps)
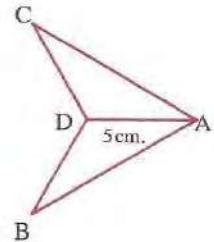
5 **Alexandria Governorate**   Eastern Educational Zone
Taymour English School

Answer the following questions :

1 **Choose the correct answer :**

1 If $\angle$ X complements $\angle$ Y , m ($\angle$ X) = 2 m ($\angle$ Y) , then m ($\angle$ Y) = ·············

(a)45°   (b)30°   (c)60°   (d)90°

2 If $\triangle$ ABC ≡ $\triangle$ XYZ , m ($\angle$ A) + m ($\angle$ B) = 140° , then m ($\angle$ Z) = ·············

(a)100°   (b)80°   (c)40°   (d)140°

3 If L_1 and L_2 are two straight lines where $L_1 \cap L_2 = \varnothing$, then the two straight lines are ·············

(a)perpendicular.   (b)coincident.   (c)intersecting.   (d)parallel.

4 The sum of the measures of the accumulative angles at a point equals the sum of the measures of ············· angles.

(a)2 right   (b)3 right   (c)4 right   (d)5 right

5 **In the opposite figure :**

If $\triangle$ ABD ≡ $\triangle$ ACD , AD = 5 cm.

, the perimeter of the figure ABDC = 30 cm.

, then the perimeter of $\triangle$ ABD = ············· cm.
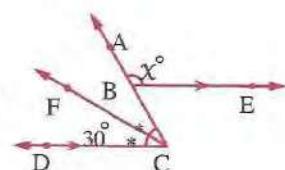
(a)35   (b)20   (c)30   (d)15

6 The angle whose measure is 95° 6Ô supplements an angle of measure ·············

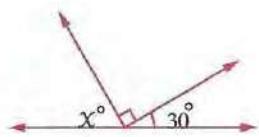(a)84°   (b)75°   (c)100°   (d)90°

2 **Complete the following :**

1 **In the opposite figure :**

B $\in \overline{AC}$, $\overrightarrow{BE}$ // $\overrightarrow{CD}$, $\overrightarrow{CF}$ bisects $\angle$ ACD and m ($\angle$ FCD) = 30°

, then X = ·············

2 If m (reflex $\angle$ A) = 240° , then the measure of the supplementary angle of $\angle$ A = ············· °

3 The perimeter of the rhombus whose side length is 10 cm. equals ·············

4 If $\overline{AB} \equiv \overline{CD}$, then AB − CD = ·············

5 In the opposite figure :

$x = $ ....
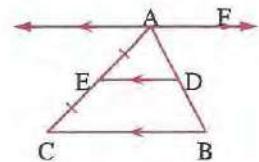
6 In the opposite figure :

If $\overleftrightarrow{AF} \parallel \overline{ED} \parallel \overline{CB}$

, AE = EC

, then AD : AB = ... : ....
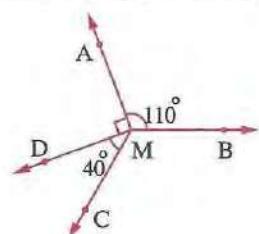
3 [a] In the opposite figure :

m ($\angle$ AMB) = 110°

, m ($\angle$ AMD) = 90°

, m ($\angle$ DMC) = 40°

, **then find :** m ($\angle$ BMC)
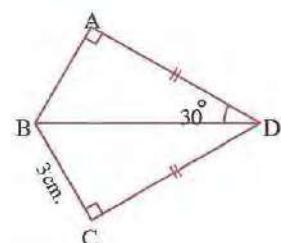
[b] In the opposite figure :

AD = DC , m ($\angle$ ADB) = 30°

, m ($\angle$ A) = m ($\angle$ C) = 90° , BC = 3 cm.

Find with reasons : m ($\angle$ ABC) , the length of $\overline{AB}$
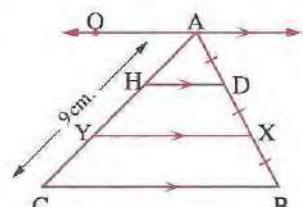
4 [a] In the opposite figure :

$\overleftrightarrow{AO} \parallel \overline{DH} \parallel \overline{XY} \parallel \overline{BC}$

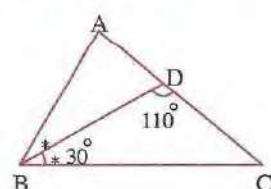, AD = DX = XB , AC = 9 cm.

Find : the length of $\overline{AY}$

[b] Using your geometric instruments , draw $\overline{AB}$ where AB = 8 cm. , then draw the line of symmetry of it. (Don't remove the arcs).

5 [a] In the opposite figure :

m ($\angle$ CDB) = 110° , $\overrightarrow{BD}$ bisects $\angle$ CBA
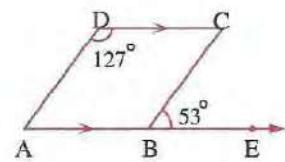
, m ($\angle$ CBD) = 30°

Find : m ($\angle$ A)

[b] In the opposite figure :

$\overrightarrow{AB} \parallel \overline{DC}$, m ($\angle$ EBC) = 53°

, m ($\angle$ D) = 127°

Is $\overline{BC} \parallel \overline{AD}$? State the reason.

6 El-Kalyoubia Governorate

Maths Supervision
Official Language Schools

Answer the following questions :

1 Choose the correct answer :

1 If m ($\angle$ B) = 140° , then m (reflex $\angle$ B) = ⋯⋯⋯⋯⋯

   (a) 40°   (b) 90°   (c) 180°   (d) 220°

2 If $\triangle$ ABC $\equiv$ $\triangle$ DEF and m ($\angle$ A) = 50° , m ($\angle$ E) = 60° , then m ($\angle$ B) = ⋯⋯⋯⋯⋯

   (a) 70°   (b) 60°   (c) 50°   (d) 10°

3 A square its side length is a whole number , then its perimeter may be equal to ⋯⋯⋯⋯⋯

   (a) 33   (b) 44   (c) 55   (d) 66

4 If the two vertically opposite angles are complementary , then the measure of each angle equals ⋯⋯⋯⋯⋯

   (a) 90°   (b) 60°   (c) 45°   (d) 30°

5 The two straight lines perpendicular to a third straight line in the same plane are ⋯⋯⋯⋯⋯

   (a) perpendicular.   (b) intersecting.   (c) coincident.   (d) parallel.

6 If $\overline{AB} \equiv \overline{CD}$, then AB $\div$ CD = ⋯⋯⋯⋯⋯

   (a) AB   (b) 0   (c) 1   (d) 2
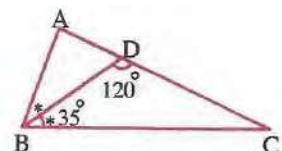
2 Complete each of the following :

1 If a straight line cuts one of two parallel straight lines in the same plane , then it ⋯⋯⋯⋯⋯ the other.

2 Two triangles are congruent if ⋯⋯⋯⋯⋯ and the included angle of one triangle are congruent to their corresponding parts of the other triangle.

3 If the ratio between the measures of two supplementary angles is 2 : 7 , then the measure of the greater angle equals ⋯⋯⋯⋯⋯°

4 If X is the midpoint of $\overline{YZ}$, then $\overline{YX} \equiv$ ⋯⋯⋯⋯⋯

5 The sum of measures of the accumulative angles at a point equals ⋯⋯⋯⋯⋯°

6 If the two adjacent angles are complementary , then their outer sides are ⋯⋯⋯⋯⋯

3 **[a]** In the opposite figure :

$\overrightarrow{BD}$ bisects $\angle ABC$, m $(\angle DBC) = 35°$

and m $(\angle BDC) = 120°$

Find : m $(\angle A)$

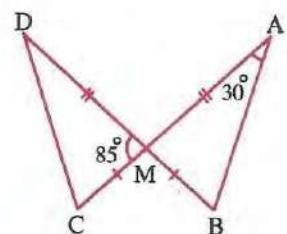**[b]** In the opposite figure :

$\overline{AC} \cap \overline{BD} = \{M\}$

, $MB = MC$, $AM = DM$

, m $(\angle A) = 30°$

, m $(\angle DMC) = 85°$

Mention the conditions of congruency of $\triangle\triangle$ AMB and DMC

, then find : m $(\angle B)$

4 **[a]** Using the geometric tools , draw an angle of measure 110° , then bisect it into two equal angles (Don't remove the arcs).
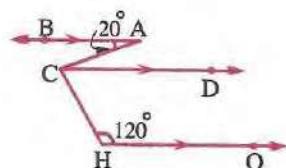
[b] In the opposite figure :

If $\overrightarrow{AB}$ // $\overrightarrow{CD}$ // $\overrightarrow{HO}$

, m $(\angle A) = 20°$

, m $(\angle H) = 120°$

, **find :** m $(\angle ACH)$ (Show the steps).
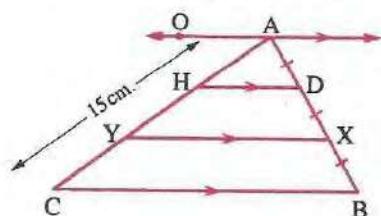
5 **[a]** In the opposite figure :

If $\overrightarrow{AO}$ // $\overline{HD}$ // $\overline{XY}$ // $\overline{CB}$

, $AD = DX = XB$

, $AC = 15$ cm.

, **find :** the length of $\overline{HC}$
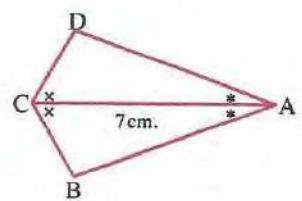
[b] In the opposite figure :

$\overleftrightarrow{AC}$ bisects $\angle BAD$ and $\angle BCD$

Is $\triangle ADC \equiv \triangle ABC$? And why ?

And if $AC = 7$ cm.

and the perimeter of $\triangle ADC = 20$ cm.
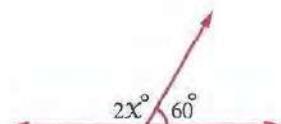
, **find :** the perimeter of the figure ADCB

7 **El-Sharkia Governorate** **Math Inspection**

Answer the following questions :

1 Choose the correct answer :

1 If m $(\angle A) = 65°$, then m (reflex $\angle A$) = ...

(a) 305°   (b) 295°   (c) 25°   (d) 115°

2 If L_1 , L_2 and L_3 are three coplanar straight lines , $L_1 // L_2$ and $L_1 \perp L_3$, then ....

(a) $L_1 \perp L_2$ (b) $L_1 // L_3$ (c) $L_2 // L_3$ (d) $L_2 \perp L_3$

3 If $\triangle ABC \equiv \triangle XYZ$ and m $(\angle A)$ + m $(\angle B) = 130°$, then m $(\angle Z)$ = ...

(a) 50°   (b) 65°   (c) 130°   (d) 180°

4 The complementary of the angle whose measure is 30° is an angle of measure ....

(a) 60°   (b) 30°   (c) 120°   (d) 150°

5 If $\overline{AB} \equiv \overline{CD}$, AB = 5 cm. , then AB – CD = ...

(a) 0   (b) 1   (c) 5   (d) 10

6 If two straight lines intersect , then each two vertically opposite angles are ....

(a) supplementary.   (b) complementary.

(c) equal in measure.   (d) adjacent.

2 Complete :
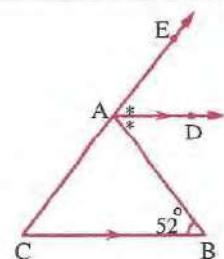
1 The sum of the measures of the accumulative angles at a point equals ....°

2 If a straight line intersects two parallel straight lines , then each two alternate angles are ....

3 The perpendicular bisector of a line segment is called ....

4 If $\angle A$ supplements $\angle B$ and $\angle A \equiv \angle B$, then m $(\angle B)$ = ...°

5 If $\triangle ABC \equiv \triangle LMN$, then BC = ...

6 In the opposite figure :

x = ...

3 [a] In the opposite figure :

$\overrightarrow{AD} // \overrightarrow{CB}$, $\overrightarrow{AD}$ bisects $\angle BAE$

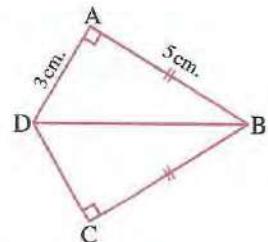, m $(\angle B) = 52°$

Find : m $(\angle BAD)$, m $(\angle C)$

[b] **In the opposite figure :**

m $(\angle A) = m (\angle C) = 90°$

, AB = BC = 5 cm. , AD = 3 cm.

1 **Prove that :** $\triangle ABD \equiv \triangle CBD$

2 **Find :** the length of $\overline{CD}$

---
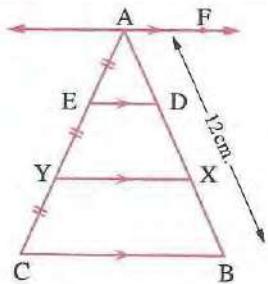
4 [a] **In the opposite figure :**

If $\overleftrightarrow{AF} \parallel \overline{DE} \parallel \overline{XY} \parallel \overline{BC}$

, AE = EY = YC

, AB = 12 cm.

Find : the length of $\overline{AX}$
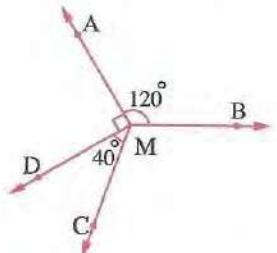
[b] **In the opposite figure :**

m $(\angle AMB) = 120°$

, m $(\angle AMD) = 90°$

, m $(\angle DMC) = 40°$

Find : m $(\angle BMC)$

---
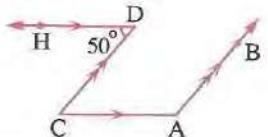
5 [a] **In the opposite figure :**

$\overrightarrow{DH} \parallel \overline{AC}$, $\overrightarrow{AB} \parallel \overline{DC}$

, m $(\angle D) = 50°$

Find : m $(\angle C)$ and m $(\angle A)$

[b] Draw the line segment $\overline{AB}$ of length 8 cm. , then draw its line of symmetry. (Don't remove arcs).

8 **El-Gharbia Governorate**   The Central Math Supervision
Official Language Schools

Answer the following questions :

1 **Choose the correct answer :**

1 If $\triangle ABC \equiv \triangle XYZ$ and m $(\angle X) + m (\angle Z) = 140°$, then m $(\angle B) = $ ··············

(a) 70°　　(b) 220°　　(c) 40°　　(d) 140°

2 If $\angle A$ supplements $\angle B$ and $\angle A \equiv \angle B$, then m $(\angle B) = $ ··············

(a) 360°　　(b) 180°　　(c) 90°　　(d) 45°

3 The sum of measures of the accumulative angles at a point is ·············· right angles.

(a) 3   (b) 4   (c) 5   (d) 6

4 The number of rectangles in the opposite figure is ··············

(a) 3   (b) 4   (c) 5   (d) 6

5 If L_1 , L_2 and L_3 are three coplanar straight lines , $L_1 // L_2$ and $L_1 \perp L_3$, then L_2 ·············· L_3

(a) $\perp$ (b) //   (c) =   (d) coincides

6 If the ratio between the measures of two supplementary angles is 5 : 13 , then the measure of the smaller angle is ··············

(a) 50°   (b) 130°   (c) 150°   (d) 180°

---

2 **Complete the following :**
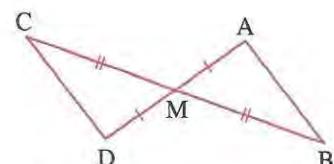
1 The two straight lines that are perpendicular to a third one in the same plane are ··············

2 The perpendicular bisector of a line segment is called ··············

3 The two right-angled triangles are congruent if ··············

4 ABCD is a parallelogram , m ($\angle$ A) = 55° , then m ($\angle$ B) = ··············°

5 If $\overline{AB} \equiv \overline{CD}$, AB = 5 cm. , 2 AB – CD = ··············

6 If two adjacent angles are complementary , then their outer sides are ··············

3 **[a] In the opposite figure :**

$\overrightarrow{AD} \cap \overrightarrow{BC} = \{M\}$, BM = MC

, AM = MD

Write the conditions for $\triangle$ AMB , $\triangle$ DMC to be congruent.
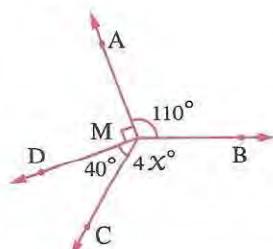
[b] In the opposite figure :

m ($\angle$ AMB) = 110° , m ($\angle$ AMD) = 90°

, m ($\angle$ DMC) = 40°

Find with steps : the value of X
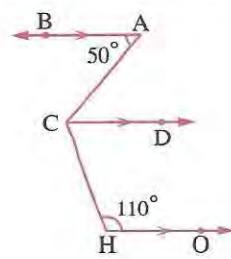
4 **[a] In the opposite figure :**

$\overrightarrow{AB} // \overrightarrow{CD} // \overrightarrow{HO}$
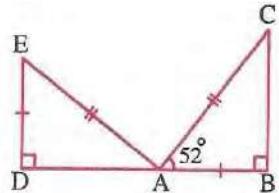
, m ($\angle$ A) = 50°

, m ($\angle$ H) = 110°

Find : m ($\angle$ ACH)

[b] In the opposite figure :

Mention the case and the conditions

of congruence between $\triangle$ ABC and $\triangle$ EDA

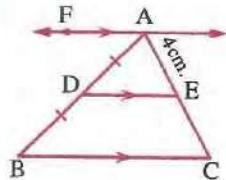**, then find :** m ($\angle$ EAD) and m ($\angle$ EAC)

---

5 **[a]** Using the geometric instruments , draw $\angle$ ABC whose measure is 110°

, then draw $\overrightarrow{BF}$ to bisect the angle.

[b] In the opposite figure :

$\overleftrightarrow{AF}$ // $\overline{DE}$ // $\overline{BC}$

, AD = BD , AE = 4 cm.

Find : the length of $\overline{AC}$, giving the reason.

---

9 **Ismailia Governorate**

Directorate of Education
Maths Supervision

Answer the following questions :

1 Choose the correct answer :

1 The angle of measure 70° is ⋯⋯⋯⋯ angle.

(a) an acute   (b) a right   (c) an obtuse   (d) a straight

2 The sum of measures of two supplementary angles equals ⋯⋯⋯⋯

(a) 90°   (b) 100°   (c) 360°   (d) 180°

3 If the side length of a square is 5 cm. , then its perimeter is ⋯⋯⋯⋯ cm.

(a) 20   (b) 30   (c) 15   (d) 10

4 If $\triangle$ ABC $\equiv$ $\triangle$ XYZ , then AC = ⋯⋯⋯⋯

(a) BC   (b) XY   (c) XZ   (d) YZ

5 The radius length of a circle is 10 cm. , then its diameter length is ⋯⋯⋯⋯ cm.

(a) 5   (b) 15   (c) 20   (d) 25

6 If L_1 , L_2 and L_3 are three coplanar straight lines , L_1 // L_2 , $L_2 \perp L_3$

, then L_1 ⋯⋯⋯⋯ L_3

(a) //   (b) $\perp$ (c) =   (d) $\equiv$

2 Complete :
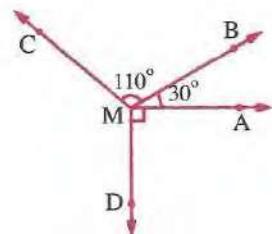
1 If $\overline{AB} \equiv \overline{CD}$, then AB – CD = ··············

2 If m ($\angle$ B) = 60° , then m (reflex $\angle$ B) = ··············°

3 If two straight lines are parallel to a third , then they are ··············

4 If $\angle$ X $\equiv$ $\angle$ Y , $\angle$ X is a right angle , then m ($\angle$ Y) = ·············· °

5 The shape ABCD $\equiv$ the shape XYZL , then m ($\angle$ B) = m ($\angle$ ··············)

6 The angle of measure 50° complements an angle of measure ··············°

---

3 **[a]** Draw $\overline{AB}$ of length 6 cm. and bisect it. (Don't remove the arcs).

[b] In the opposite figure :

m ($\angle$ AMB) = 30° , m ($\angle$ BMC) = 110°

, m ($\angle$ AMD) = 90°

Find : m ($\angle$ CMD)

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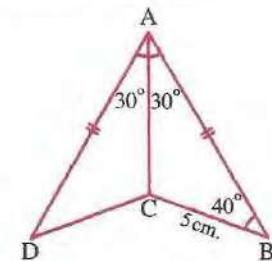
4 **[a] In the opposite figure :**

1 Is $\triangle$ ACB $\equiv$ $\triangle$ ACD ? Why ?

2 Find : m ($\angle$ D)

3 Find : the length of $\overline{CD}$
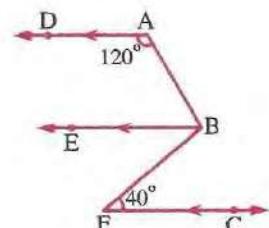
[b] In the opposite figure :

$\overrightarrow{AD}$ // $\overrightarrow{BE}$ // $\overrightarrow{FC}$, m ($\angle$ A) = 120°

, m ($\angle$ F) = 40°

Find : **1** m ($\angle$ ABE)
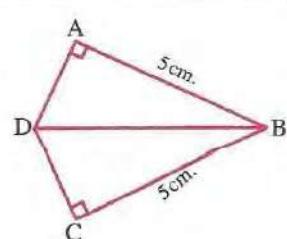
2 m ($\angle$ FBE)

3 m ($\angle$ ABF)

---

5 **[a] In the opposite figure :**
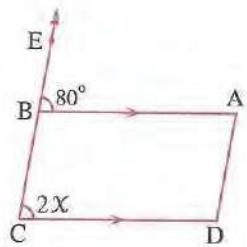
Is $\triangle$ CBD $\equiv$ $\triangle$ ABD ? Why ?

[b] In the opposite figure :

$\overline{AB} \parallel \overline{CD}$

Find : the value of X

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10   Damietta Governorate

New Damietta Educ. Zone
El-Kafrawy Lang. School

Answer the following questions :

1 Complete the following :
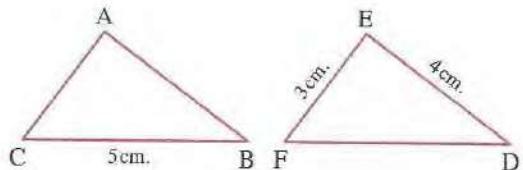
1. If the two outer sides of two adjacent angles are on the same straight line , then that two angles are ⋯⋯⋯⋯⋯

2. The two triangles are congruent if two sides and ⋯⋯⋯⋯⋯ are congruent with their corresponding parts in the other triangle.

3. The sum of measures of the accumulative angles at a point equals ⋯⋯⋯⋯⋯°

4. **In the opposite figure :**

   If $\triangle ABC \equiv \triangle EDF$, ED = 4 cm.

   , EF = 3 cm. , CB = 5 cm.

   , then the perimeter of $\triangle ABC$ = ⋯⋯⋯⋯⋯ cm.
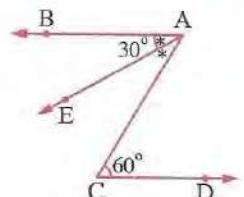
5. **In the opposite figure :**

   $\overrightarrow{AE}$ bisects $\angle BAC$

   , m ($\angle BAE$) = 30°

   , m ($\angle ACD$) = 60° , then $\overrightarrow{AB} \parallel$ ⋯⋯⋯⋯⋯

6. If m ($\angle A$) = 40° , then m (reflex $\angle A$) = ⋯⋯⋯⋯⋯°

---

2 Choose the correct answer from those given :

1. If the two triangles ABC and XYZ are congruent , then ⋯⋯⋯⋯⋯

   (a) BC = XZ   (b) YX = CA   (c) ZY = CB   (d) AB = YZ

2. The best unit to measure the area of a room is ⋯⋯⋯⋯⋯

   (a) mm^2.   (b) cm^2.   (c) m^2.   (d) km^2.

3. The angle whose measure is 45° complements an angle of measure ⋯⋯⋯⋯⋯

   (a) 45°   (b) 90°   (c) 180°   (d) 135°

4 If ∠ A ≡ ∠ B and ∠ A , ∠ B are supplementary angles , then m (∠ A) = ···············

(a) 45°   (b) 90°   (c) 125°   (d) 180°
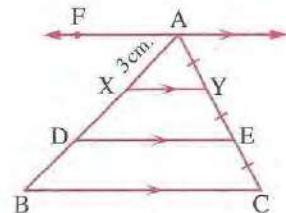
5 In the opposite figure :

$\overleftrightarrow{AF}$ // $\overline{XY}$ // $\overline{DE}$ // $\overline{BC}$ and AY = YE = EC
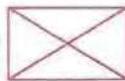
, AX = 3 cm.

, then AD = ··············· cm.

(a) 2   (b) 3   (c) 4   (d) 6

6 The number of triangles in the figure [⊠] equals ···············

(a) 4   (b) 6   (c) 7   (d) 8

---
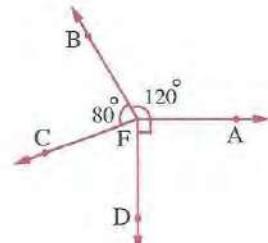
3 [a] In the opposite figure :

m (∠ AFB) = 120°

, m (∠ BFC) = 80°

, m (∠ AFD) = 90°

Find : m (∠ CFD)
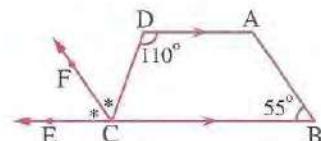
[b] In the opposite figure :

$\overrightarrow{AD}$ // $\overrightarrow{BC}$, $\overrightarrow{CF}$ bisects ∠ DCE

, m (∠ ABC) = 55° , m (∠ ADC) = 110°

Does $\overleftrightarrow{AB}$ // $\overrightarrow{CF}$? Why ?

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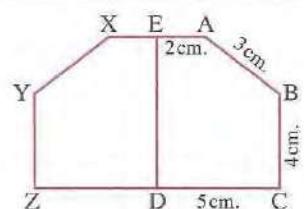
4 [a] In the opposite figure :

The figure ABCDE ≡ the figure XYZDE

Find : **1** the length of $\overline{ZC}$

    2 the perimeter of the figure ABCZYX

    3 m (∠ EDZ)
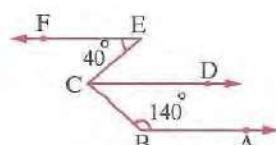
[b] In the opposite figure :

$\overrightarrow{BA}$ // $\overrightarrow{CD}$, $\overrightarrow{CD}$ // $\overrightarrow{EF}$

, m (∠ E) = 40°

, m (∠ B) = 140°

Find : m (∠ ECB)
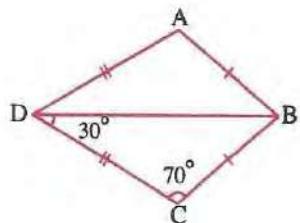
5 **[a]** In the opposite figure :

AB = BC , AD = CD , m (∠ C) = 70°

, m (∠ BDC) = 30°

Does △ ABD ≡ △ CBD ? Why ?

Find : m (∠ ABD)

[b] Draw ∠ ABC where m (∠ B) = 100° , using the ruler and the compasses bisect ∠ B by $\overrightarrow{BD}$ (Don't remove the arcs)

11 **Beni Suef Governorate**

Education Administration
Directorate of Official Language Schools

Answer the following questions :

1 Choose the correct answer from those given :

1 In the opposite figure :

If A ∈ $\overleftrightarrow{BC}$ and m (∠ BAD) = 70°
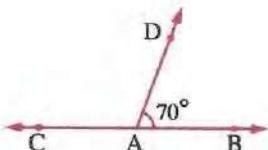
, then m (∠ CAD) = ·············

(a) 55°   (b) 70°   (c) 110°   (d) 120°

2 If m (∠ A) = 80° , then m (reflex ∠ A) = ·············

(a) 10°   (b) 100°   (c) 190°   (d) 280°

3 If △ ABC ≡ △ XYZ , then AB = ·············

(a) BC   (b) YZ   (c) XZ   (d) XY

4 In △ ABC , if m (∠ A) + m (∠ B) = 130° , then m (∠ C) = ·············

(a) 40°   (b) 50°   (c) 65°   (d) 130°

5 The angle whose measure is more than 90° and less than 180° is called ············· angle.
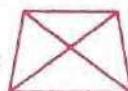
(a) an acute   (b) a right   (c) an obtuse   (d) a reflex

6 The number of triangles in the figure ⧄ equals ·············

(a) 4   (b) 6   (c) 7   (d) 8

2 Complete each of the following :

1 The sum of measures of the two complementary angles equals ·············°

2 If ∠ A ≡ ∠ B and m (∠ A) = 50° , then m (∠ B) = ·············°

3 If the polygon ABCD ≡ the polygon XYZL , then m (∠ BCD) = m (∠ ················)

4 Two triangles are congruent if each ·············· of one triangle is congruent to the corresponding ·············· of the other triangle.

5 The straight line that is perpendicular to one of two parallel lines in the same plane is ·············· to the other.

6 The perpendicular bisector of a line segment is called ··············

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3 [a] Using the geometric instruments , draw ∠ ABC of measure 100° , then draw $\overrightarrow{BF}$ to bisect the angle (Don't remove the arcs).
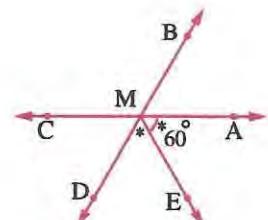
[b] **In the opposite figure :**

M is the point of intersection of $\overleftrightarrow{AC}$ and $\overleftrightarrow{BD}$

, $\overrightarrow{ME}$ bisects ∠ AMD

and m (∠ AME) = 60°

Find : m (∠ AMD) and m (∠ BMC) (Give reason).

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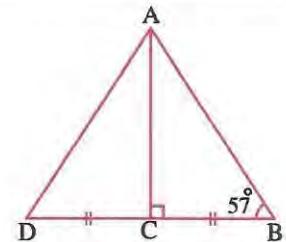
4 [a] **In the opposite figure :**

CB = CD , $\overline{AC} \perp \overline{BD}$

and m (∠ B) = 57°

Prove that : △ ACB ≡ △ ACD

, then find : m (∠ ADC)
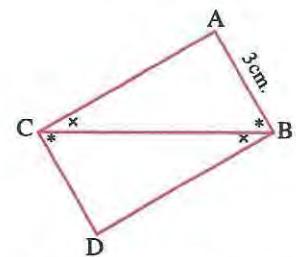
[b] **In the opposite figure :**

m (∠ ABC) = m (∠ BCD)

, AB = 3 cm.

and m (∠ ACB) = m (∠ DBC)

Study the case of congruency , **then find :** the length of $\overline{CD}$

---
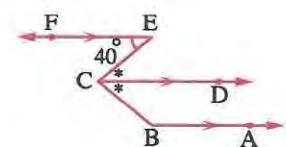
5 [a] **In the opposite figure :**

$\overrightarrow{BA}$ // $\overrightarrow{CD}$ // $\overrightarrow{EF}$

, $\overrightarrow{CD}$ bisects ∠ BCE and m (∠ CEF) = 40°

Find : m (∠ ECD) , m (∠ DCB) and m (∠ CBA) (Give reason).
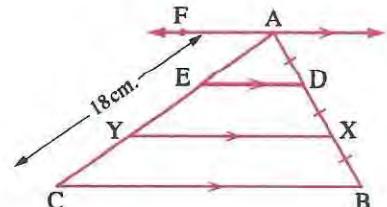
[b] **In the opposite figure :**

$\overleftrightarrow{AF}$ // $\overline{DE}$ // $\overline{XY}$ // $\overline{BC}$, AC = 18 cm.

and AD = DX = XB

Find : the length of $\overline{EY}$ (Give reason).

12 New Valley Governorate

Answer the following questions :

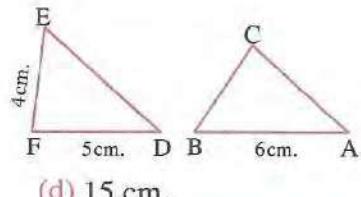**1** Choose the correct answer :

1 The acute angle supplements ·············· angle.

(a) an acute   (b) an obtuse   (c) a right   (d) a reflex

2 The two straight lines that are perpendicular to a third in the same plane are ···············

(a) perpendicular.   (b) intersecting.   (c) coincident.   (d) parallel.

3 The angle whose measure is more than 90° and less than 180° is ·············· angle.

(a) an obtuse   (b) an acute   (c) a right   (d) a straight

4 If $\triangle ABC \equiv \triangle XYZ$, $m (\angle A) + m (\angle B) = 100°$, then $m (\angle Z) = $ ··············

(a) 50°   (b) 80°   (c) 90°   (d) 100°

5 The triangle whose perimeter is 12 cm. and the lengths of two of its sides are 2 cm. , 5 cm. is ···············

(a) obtuse-angled.   (b) acute-angled.   (c) right-angled.   (d) isosceles.

6 In the opposite figure :

If $\triangle ABC \equiv \triangle DEF$

, then the perimeter of $\triangle ABC = $ ··············

(a) 9 cm.   (b) 10 cm.   (c) 11 cm.   (d) 15 cm.
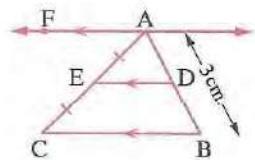
2 Complete :

1 In the opposite figure :

If AB = 3 cm.

, then BD = ·············· cm.

2 The angle whose measure is 36° complements an angle of measure ··············° and supplements an angle of measure ··············°

3 If two straight lines intersect , then each two vertically opposite angles are ···············

4 If $\triangle ABC \equiv \triangle XYZ$, then $m (\angle CAB) = m (\angle$ ··············)

5 If $m (\angle A) = 100°$, then $m (\text{reflex} \angle A) = $ ··············°

6 The sum of the measures of the accumulative angles at a point is ··············°

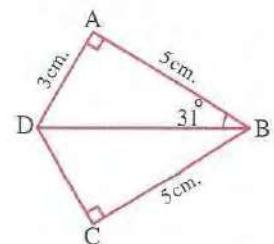**3** [a] Mention two cases of congruency of two triangles.

[b] **In the opposite figure :**

m (∠ BAD) = m (∠ BCD) = 90°

, m (∠ ABD) = 31°

, AB = CB = 5 cm. , AD = 3 cm.

Find : the length of $\overline{CD}$

---

4 [a] By using your geometric instruments , draw an angle of measure 120° , then divide it into four congruent angles. (Don't remove the arcs).
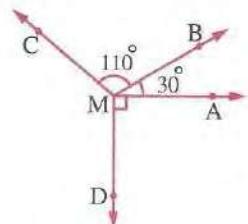
[b] **In the opposite figure :**

m (∠ AMB) = 30°

, m (∠ BMC) = 110°

, m (∠ AMD) = 90°

Find : m (∠ CMD)

---
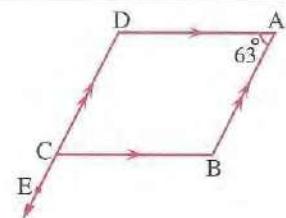
5 [a] **In the opposite figure :**

$\overrightarrow{AB}$ // $\overrightarrow{DC}$, $\overline{AD}$ // $\overline{BC}$

, m (∠ BAD) = 63°

Find : m (∠ BCE)
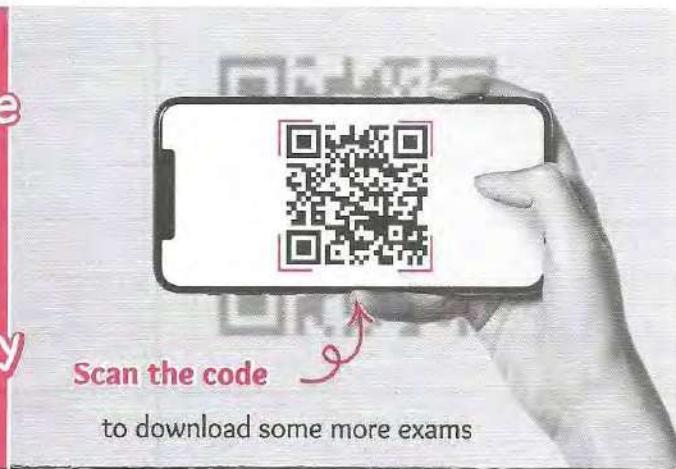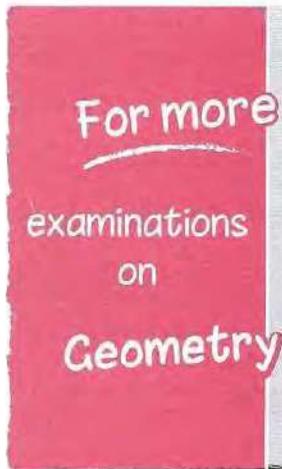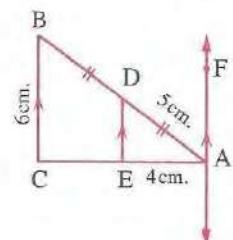
[b] **In the opposite figure :**

$\overleftrightarrow{AF}$ // $\overline{DE}$ // $\overline{BC}$

, AD = BD , AD = 5 cm.

, AE = 4 cm. , BC = 6 cm.

Find : the perimeter of △ ABC

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Final Examinations

on Geometry

Model Examinations of the School Book

on Geometry

Model 1

Answer the following questions :
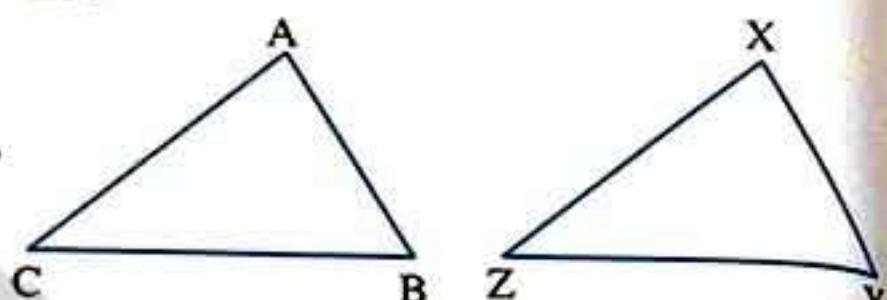
1 Complete each of the following :

1 The perpendicular bisector of a line segment is called ....

2 In the opposite figure :

If △ ABC ≡ △ XYZ , m (∠ A) + m (∠ B) = 140°
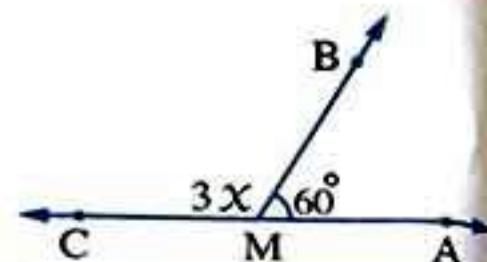
, then m (∠ Z) = ...°

3 If m (∠ B) = 105° , then m (reflex ∠ B) = ...°

4 In the opposite figure :

If $\overrightarrow{MB} \cap \overrightarrow{AC} = \{M\}$, m (∠ AMB) = 60°

, then the value of x equals ....°

5 Two right-angled triangles are congruent if ....

2 Choose the correct answer from those given :

1 If ∠ X ≡ ∠ Y , ∠ X and ∠ Y are supplementary angles , then m (∠ X) = ...

(a) 45°   (b) 90°   (c) 135°   (d) 180°

2 In the opposite figure :
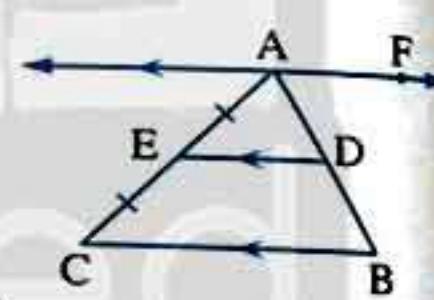
If $\overleftrightarrow{AF} \parallel \overleftrightarrow{DE} \parallel \overline{BC}$, AE = EC

, then AD : AB = ...

(a) 2 : 1   (b) 3 : 2   (c) 1 : 3   (d) 1 : 2

3 The two straight lines that are perpendicular to a third one are ....

(a) perpendicular.   (b) intersecting.

(c) coincident.   (d) parallel.

4 The measure of each of the two equal complementary angles equals ....

(a) 180°   (b) 45°   (c) 360°   (d) 90°

5 If two straight lines intersect , then each two .... angles have the same measure.

(a) vertically opposite   (b) adjacent

(c) alternate   (d) corresponding

6 If △ ABC ≡ △ LMN , then m (∠ ACB) = m (∠ ....)
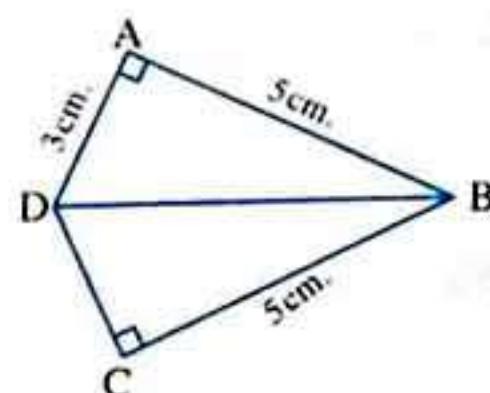
(a) LMN   (b) MLN   (c) LNM   (d) NLM

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Final Examinations

3 **[a]** In the opposite figure :

m (∠ BAD) = m (∠ BCD) = 90°

, AB = CB = 5 cm. , AD = 3 cm.

Mention the conditions for Δ ABD , Δ CBD to be congruent

, **then find :** The length of $\overline{CD}$
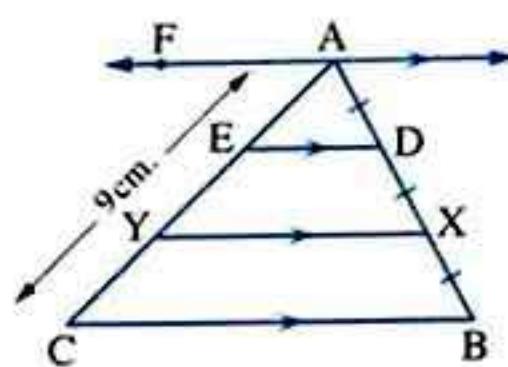
[b] In the opposite figure :

$\overleftrightarrow{AF}$ // $\overline{DE}$ // $\overline{XY}$ // $\overline{BC}$

, AD = DX = XB , AC = 9 cm.

Find : The length of $\overline{AY}$ (Give the reason)
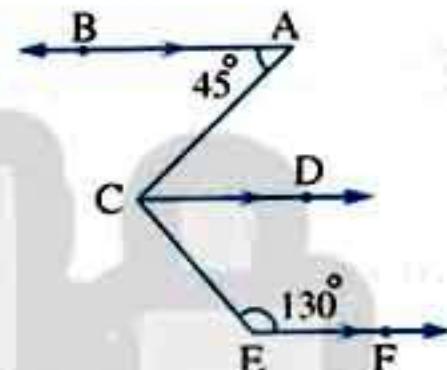
4 **[a]** In the opposite figure :

$\overrightarrow{AB}$ // $\overrightarrow{CD}$ // $\overrightarrow{EF}$

, m (∠ A) = 45°

, m (∠ E) = 130°

Find : m (∠ ACE)
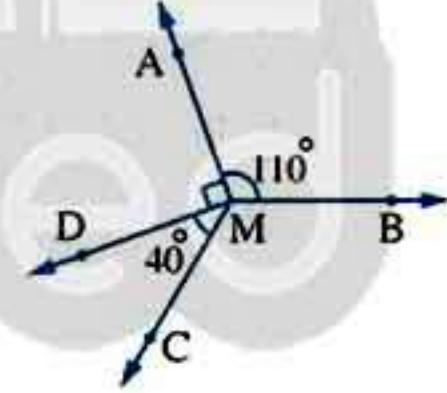
[b] In the opposite figure :

m (∠ AMB) = 110°

, m (∠ AMD) = 90°

, m (∠ DMC) = 40°

Find with steps : m (∠ BMC)
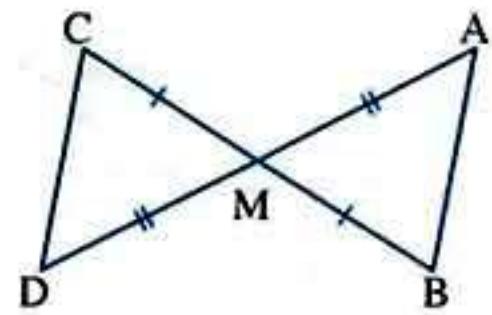
5 **[a]** In the opposite figure :

$\overline{AD} \cap \overline{BC} = \{M\}$

, BM = MC

, AM = MD

Write the conditions for Δ AMB , Δ DMC to be congruent.

[b] Using your geometric instruments , draw ∠ ABC of measure 110° , then draw $\overrightarrow{BF}$ to bisect the angle.

الصف الاول الاعدادى   موقع ذاكرولى التعليمى   كتاب المعاصر

Geometry

Model 2

Answer the following questions :

1 Complete each of the following :

1. The sum of the measures of the accumulative angles at a point equals ....°

2. If a straight line intersects two parallel straight lines , then each two corresponding angles are ....

3. If m (∠ A) = 110° , then m (reflex ∠ A) = ...°

4. Two right-angled triangles are congruent if ....

5. The two adjacent angles formed by the intersection of a straight line and a ray with a starting point on this straight line are ....

2 Choose the correct answer from those given :

1. If ∠ X complements ∠ Y and ∠ X ≡ ∠ Y , then m (∠ X) = ...
   (a) 45°   (b) 90°   (c) 180°   (d) 360°

2. The number of triangles in the figure ⊠ equals ....
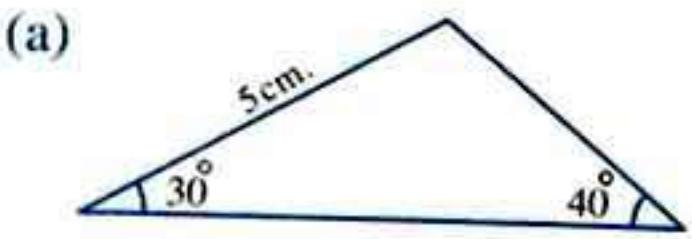   (a) 4   (b) 6   (c) 7   (d) 8
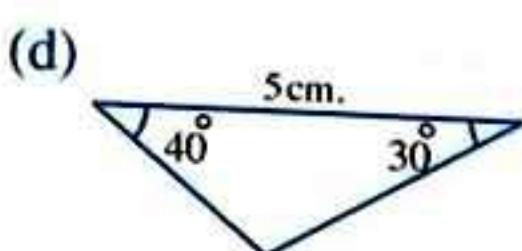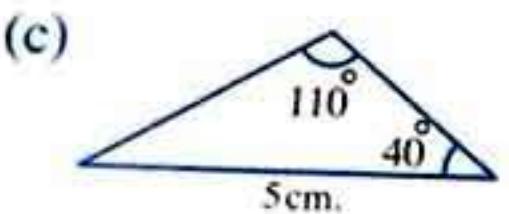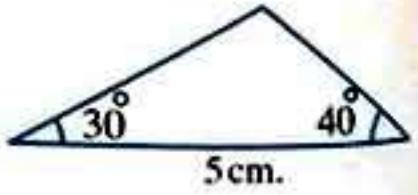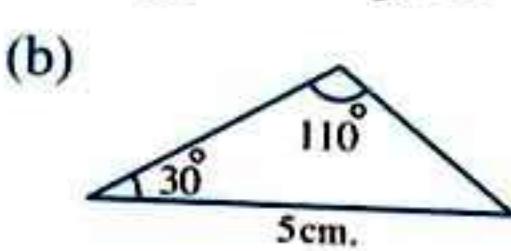
3. If the ratio between the measures of two supplementary angles is 5 : 13 , then the measure of the smaller angle is ....
   (a) 50°   (b) 130°   (c) 150°   (d) 180°

4. If △ ABC ≡ △ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...
   (a) 50°   (b) 80°   (c) 90°   (d) 100°

5. The two straight lines that are perpendicular to a third one are ....
   (a) perpendicular.   (b) parallel.   (c) coincident.   (d) intersecting.

6. The figure .... is not congruent to the opposite figure.

(a) (b) (c) (d)

60

3 **[a]** Mention two cases of congruency of two triangles.

[b] In the opposite figure :
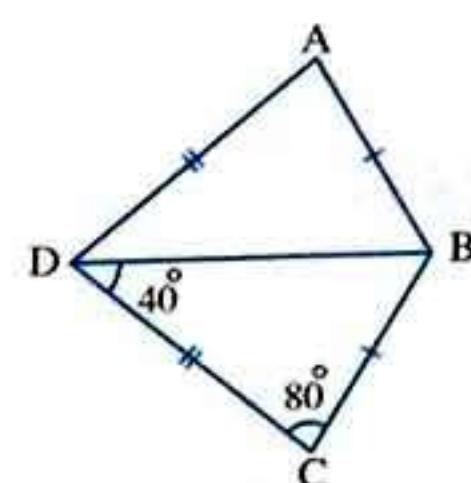
AB = BC , AD = DC

, m (∠ C) = 80°

, m (∠ BDC) = 40°

Prove that : △ CBD ≡ △ ABD

, then find : m (∠ ABD)
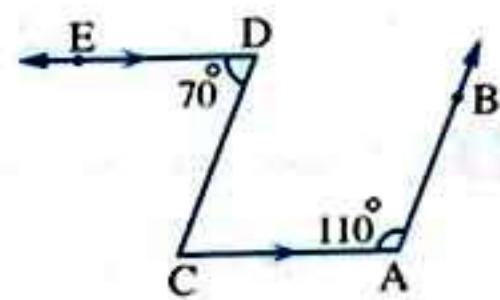
4 **[a]** In the opposite figure :

$\overrightarrow{DE}$ // $\overrightarrow{AC}$, m (∠ A) = 110°

, m (∠ D) = 70°

Find : m (∠ C)

Is $\overrightarrow{AB}$ // $\overrightarrow{CD}$? (Give the reason)

[b] Using the geometric instruments , draw ∠ ABC where m (∠ B) = 80° , then draw $\overrightarrow{BD}$
to bisect it.   (Don't remove the arcs).
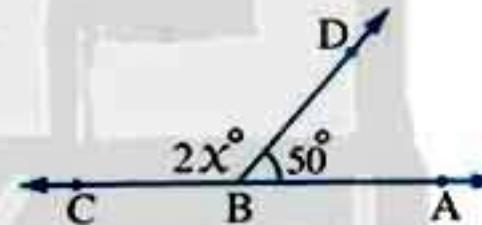
5 **[a]** In the opposite figure :

$\overrightarrow{AC}$ ∩ $\overrightarrow{BD}$ = {B}

, m (∠ ABD) = 50°

, m (∠ DBC) = 2 x°

Find in degrees the value of x
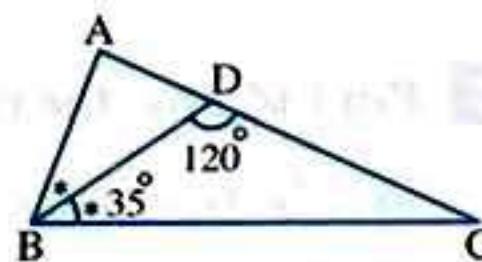
[b] In the opposite figure :

$\overrightarrow{BD}$ bisects ∠ ABC

, m (∠ DBC) = 35°

, m (∠ BDC) = 120°

Find : m (∠ A) in degrees.

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Geometry

Model examination for the merge students

Answer the following questions :

1 Complete each of the following :

[1] If m (∠ A) = 100° , then m (reflex ∠ A) = ...°

[2] The angle whose measure is 50° complements an angle of measure ....°

[3] The two straight lines parallel to a third are ....

[4] Two triangles are congruent if two sides and ....

[5] If △ ABC ≡ △ XYZ , then m (∠ Z) = m (∠ ....)
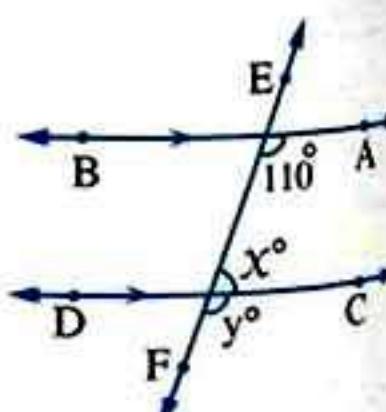
2 Choose the correct answer from those given :

[1] The sum of the measures of the accumulative angles at a point equals ....

(a) 630°   (b) 180°   (c) 90°   (d) 360°

[2] The axis of symmetry of a line segment is ....

(a) perpendicular to it from its midpoint.   (b) parallel to it.

(c) equal to it in length.   (d) congruent to it.

[3] The supplement of the angle whose measure is 30° is an angle of measure ....

(a) 60°   (b) 180°   (c) 150°   (d) 90°

[4] The angle whose measure is more than 90° and less than 180° is .... angle.

(a) an obtuse   (b) an acute   (c) a right   (d) a straight

[5] If △ ABC ≡ △ XYZ , then AB = ...

(a) XY   (b) XZ   (c) YZ   (d) BC

3 Put (✔) for the correct statement and (✗) for the incorrect statement :

[1] The right-angled triangle is congruent to the equilateral triangle.   ( )

[2] The two angles whose measures are 100° and 80° are supplementary.   ( )

[3] From the opposite figure :

(a) $\overleftrightarrow{AB}$ // $\overleftrightarrow{EF}$ ( )

(b) $x = 70°$ ( )

(c) $y = 180°$ ( )

62

4 **[a]** In the opposite figure :
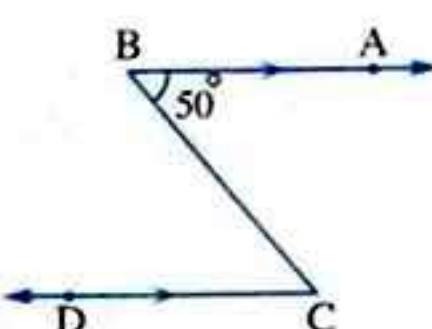
m (∠ ABC) = 50° , $\overrightarrow{BA}$ // $\overrightarrow{CD}$

Complete to find : m (∠ BCD)

$\overrightarrow{BA}$ // ....

, then m (∠ ABC) = m (∠ ....) (............... angles)

, m (∠ BCD) = ...°
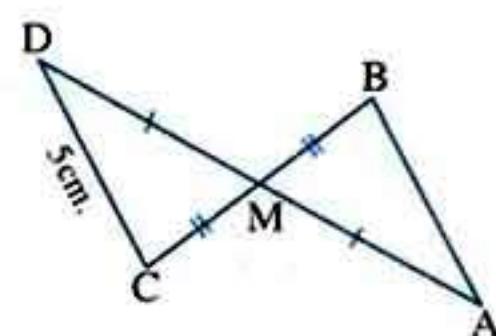
[b] From the opposite figure , complete :
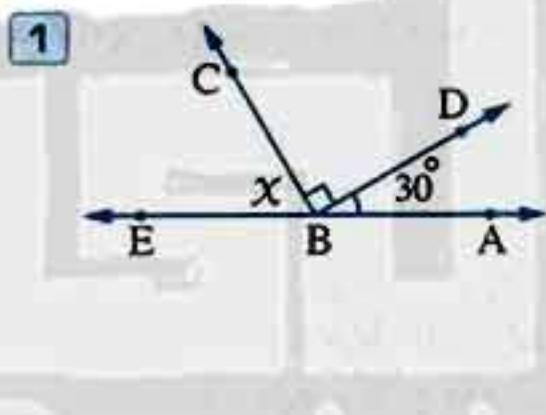
① △ ABM ≡ △ ....

② AB = ... cm.
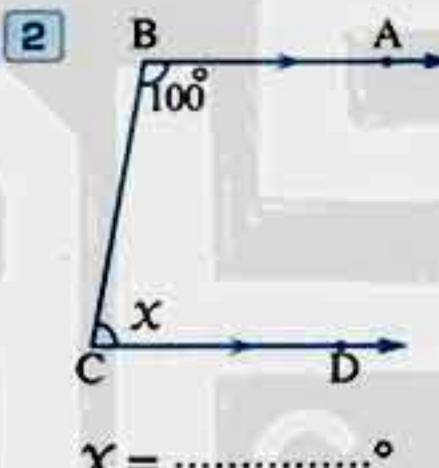
③ m (∠ B) = m (∠ ....)
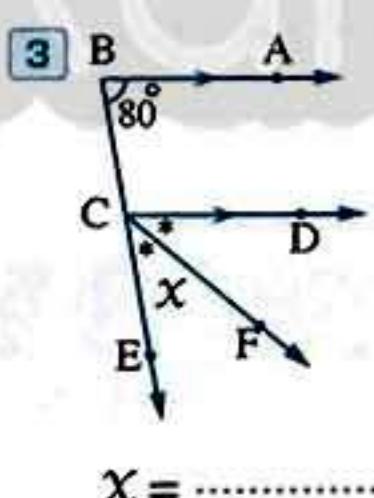
5 **[a]** In each of the following figures , find the value of *x* :

①

x = ...°

②

x = ...°

③

x = ...°

④

x = ...°
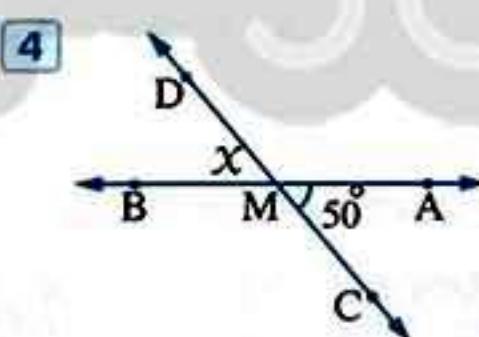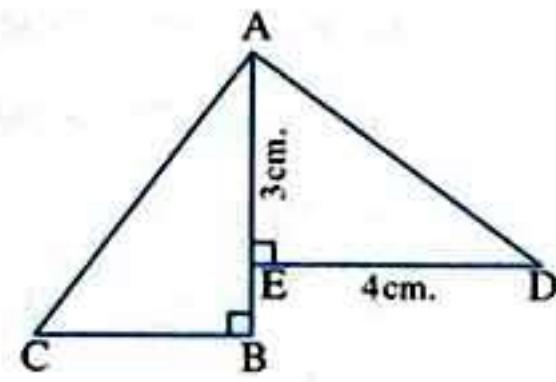
[b] In the opposite figure :

If △ ABC ≡ △ DEA ,

AE = 3 cm. and DE = 4 cm.

, complete : BE = ... cm.

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Some Schools Examinations ?   on Geometry
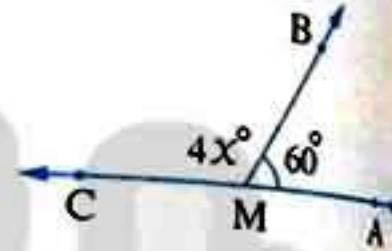
1 Cairo Governorate

Heliopolis Educational Directorate
St.Fatima Language School-Abbassia

Answer the following questions :

1 **Complete :**

1 The measure of each of two equal complementary angles equals ....°

2 If m ($\angle$ A) = 180° , then m (reflex $\angle$ A) = ...°

3 The straight line that is perpendicular to one of two parallel lines is also .... to the other.

4 **In the opposite figure :**

If m ($\angle$ AMB) = 60°

, then x = ...

5 If a straight line intersects two parallel straight lines , then each two corresponding angles are ....
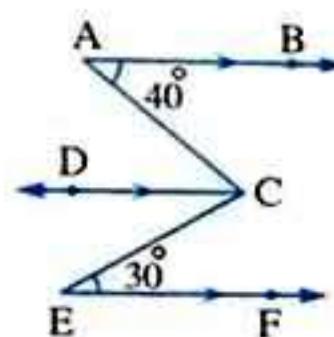
2 **Choose the correct answer :**

1 If m ($\angle$ X) = 3 m ($\angle$ Y) and $\angle$ X , $\angle$ Y are supplementary angles , then m ($\angle$ X) = ...

(a) 90°   (b) 180°   (c) 45°   (d) 135°

2 If $\triangle$ ABC ≡ $\triangle$ XYZ and m ($\angle$ X) + m ($\angle$ Y) = 100° , then m ($\angle$ C) = ...

(a) 50°   (b) 100°   (c) 90°   (d) 80°

3 The supplement of the angle whose measure is 30° is an angle of measure ....

(a) 60°   (b) 180°   (c) 150°   (d) 20°

4 The ratio between the measures of two complementary angles is 2 : 7 , then the measure of the smaller angle is ....

(a) 40°   (b) 140°   (c) 60°   (d) 20°

5 If two straight lines intersect , then each two .... angles have the same measure.

(a) vertically opposite   (b) adjacent

(c) alternate   (d) corresponding

6 If $\triangle$ ABC ≡ $\triangle$ XYZ , then BC = ...

(a) XY   (b) YZ   (c) XZ   (d) AB

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Final Examinations

3 In the opposite figure :

$\overrightarrow{AB} // \overrightarrow{CD} // \overrightarrow{EF}$
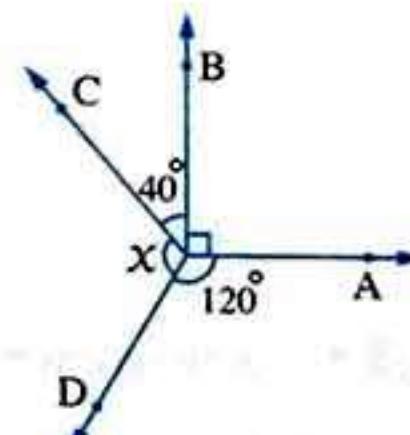
, m (∠ A) = 40° , m (∠ E) = 30°

Find : m (∠ ACE)

4 **[a]** In the opposite figure :

Find the value of x

[b] In the opposite figure :
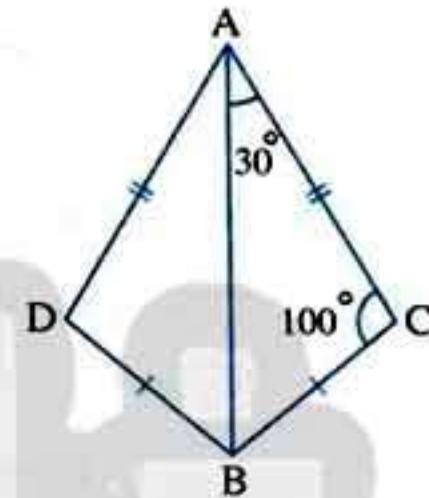
AC = AD , BC = BD

, m (∠ ACB) = 100°

, m (∠ CAB) = 30°

1 **Prove that :** Δ ABC ≡ Δ ABD

2 **Find :** m (∠ ABD)
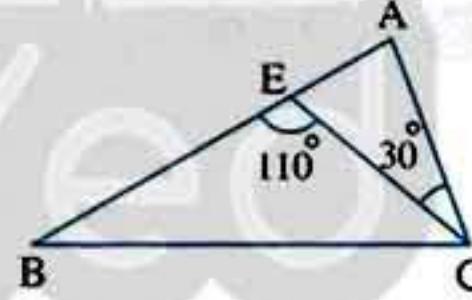
5 **[a]** Mention two cases of congruency of two triangles.

[b] In the opposite figure :

m (∠ ACE) = 30°

, m (∠ CEB) = 110°

Find : m (∠ A)

2 **Cairo Governorate** Zietoun Educational Administration

Gomhouria Language School

Answer the following questions :
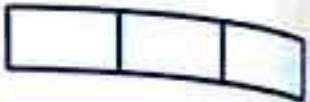
1 **Choose the correct answer :**

1 If two straight lines intersect , then each two vertically opposite angles are ··············

(a) equal in measure. (b) adjacent. (c) supplementary. (d) complementary.

2 If ∠ X ≡ ∠ Y and ∠ X , ∠ Y are complementary angles , then m (∠ X) = ··············

(a) 45° (b) 90° (c) 135° (d) 180°

Geometry
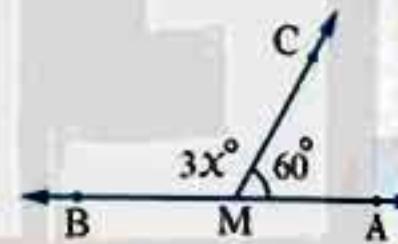
3 The best unit to measure the area of a room is ···············

(a) mm^2 (b) cm^2 (c) m^2 (d) km^2

4 If $\triangle ABC \equiv \triangle XYZ$, $m(\angle A) = 45°$, $m(\angle C) = 75°$, then $m(\angle Y) = $ ···············

(a) 60°   (b) 65°   (c) 55°   (d) 100°

5 If L_1 , L_2 and L_3 are straight lines , $L_1 \perp L_3$, $L_2 \perp L_3$, then L_1 ··············· L_2

(a) //   (b) $\perp$ (c) coincides   (d) intersects

6 The number of rectangles of the opposite figure is ···············

(a) 3   (b) 4   (c) 6   (d) 5

2 **Complete each of the following :**

1 If $m(\angle A) = 100°$, then $m(\text{reflex} \angle A) = $ ···············°

2 Two triangles are congruent if each ··············· of one triangle is equal to the corresponding part of the other triangle.

3 The perpendicular to a line segment from its midpoint is called ···············

4 If the area of a rectangle is $20 \, cm^2$, its width is 4 cm. , then the perimeter of the rectangle is ··············· cm.

5 In the opposite figure :
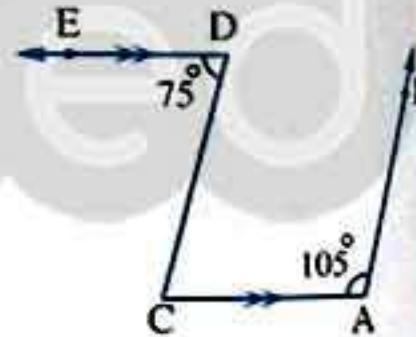
If $\overrightarrow{AB} \cap \overrightarrow{MC} = \{M\}$

, then $X = $ ···············°

3 **[a]** In the opposite figure :

$\overrightarrow{DE} // \overline{AC}$, $m(\angle A) = 105°$

, $m(\angle D) = 75°$

Find : $m(\angle C)$

Is $\overrightarrow{AB} // \overline{CD}$? Giving the reason.

[b] By using your geometric instruments , draw $\overline{AB}$ of length 6 cm. , then draw the straight line L that is the axis of symmetry of $\overline{AB}$ where $\overline{AB} \cap L = \{C\}$
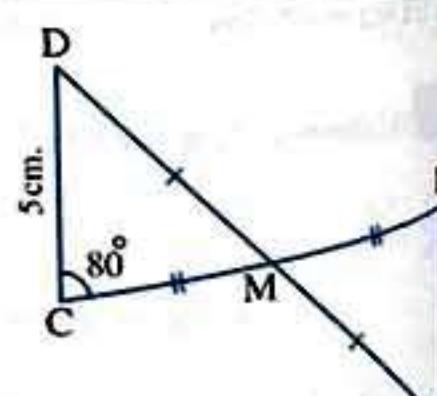
4 **[a]** In the opposite figure :

$m(\angle C) = 80°$, $\overline{CB} \cap \overline{AD} = \{M\}$

, $MB = MC$, $MD = MA$, $CD = 5$ cm.

Mention the conditions for

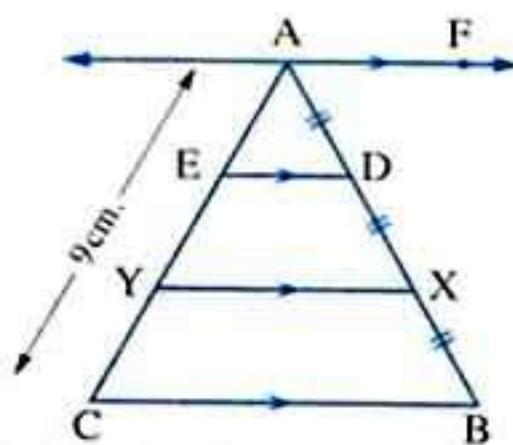$\triangle ABM$, $\triangle DCM$ to be congruent

, and find : $m(\angle B)$

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Final Examinations

[b] In the opposite figure :

$\overrightarrow{AF}$ // $\overrightarrow{DE}$ // $\overrightarrow{XY}$ // $\overrightarrow{BC}$

, AD = DX = XB , AC = 9 cm.

Find : The length of $\overline{AY}$
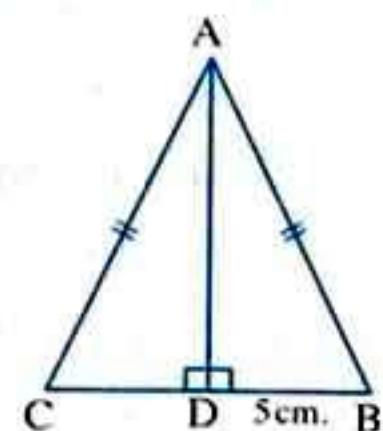
5 **[a]** In the opposite figure :

AB = AC , m (∠ ADB) = m (∠ ADC) = 90° , BD = 5 cm.

Mention the conditions for

Δ ABD , Δ ACD to be congruent

, and find : The length of $\overline{BC}$
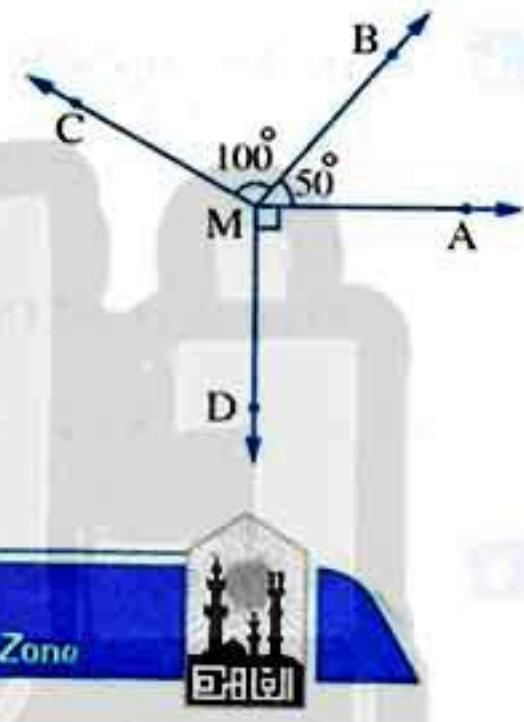
[b] In the opposite figure :

m (∠ AMB) = 50° , m (∠ CMB) = 100°

, m (∠ DMA) = 90°

Find : m (∠ CMD)

3 Cairo Governorate

Dar El-Salam and
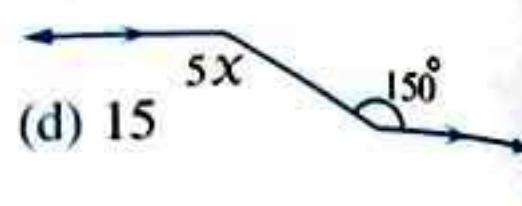El-Basatoon Education Zone

Answer the following questions :

1 **Complete :**

1 The two adjacent angles formed by the intersection of a straight line and a ray with a starting point on this straight line are ....

2 The sum of measures of the accumulative angles at a point equals ....°

3 If m (∠ X) = 140° , then the measure of the reflex angle of ∠ X = ...°

4 If two straight lines are perpendicular to a third , then the two straight lines are ....

5 If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...°

2 **Choose the correct answer :**

1 If ∠ X ≡ ∠ Y and ∠ X , ∠ Y are complementary angles , then m (∠ X) = ...°

(a) 45   (b) 90   (c) 180   (d) 30

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Geometry

2 If the ratio between the measures of two supplementary angles is 5 : 13 , then the measure of the smaller angle is ....°

(a) 130　　　　(b) 50　　　　(c) 180　　　　(d) 150

3 If a straight line cuts two parallel lines , then each two corresponding angles are ....

(a) equal in measure.　　　　　(b) complementary.

(c) supplementary.　　　　　　(d) right.

4 If △ XYZ ≡ △ ABC , then ....

(a) BC = XZ　　(b) YX = CA　　(c) ZY = CB　　(d) AB = YZ

5 In the opposite figure : X = ...°

(a) 50　　　　(b) 30　　　　(c) 90　　　　(d) 15

6 If $\overline{XY} ≡ \overline{AB}$, XY = 5 cm. , then XY + 3 AB = ... cm.

(a) 5　　　　(b) 20　　　　(c) 15　　　　(d) 30

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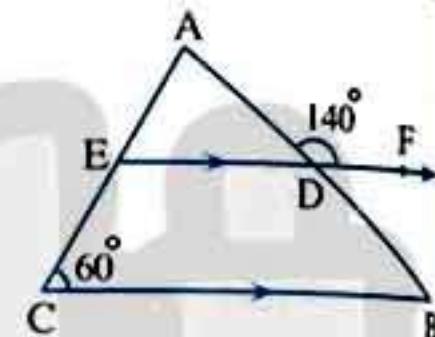
3 [a] In the opposite figure :

$\overrightarrow{BC}$ // $\overrightarrow{EF}$, m (∠ C) = 60°

, m (∠ ADF) = 140°

Find each of the following : m (∠ B) and m (∠ A)

[b] Draw ∠ XYZ of measure 120° , then bisect it. (Don't remove the arcs)

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4 [a] In the opposite figure :
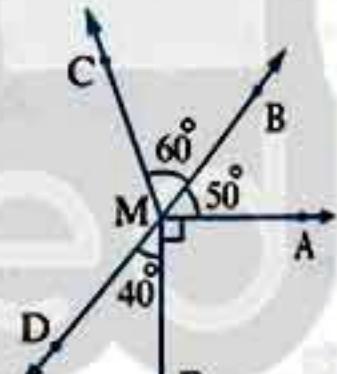
If m (∠ AMB) = 50° , m (∠ BMC) = 60°

, m (∠ DME) = 40°

and $\overrightarrow{MA} ⊥ \overrightarrow{ME}$

, find : m (∠ CMD)
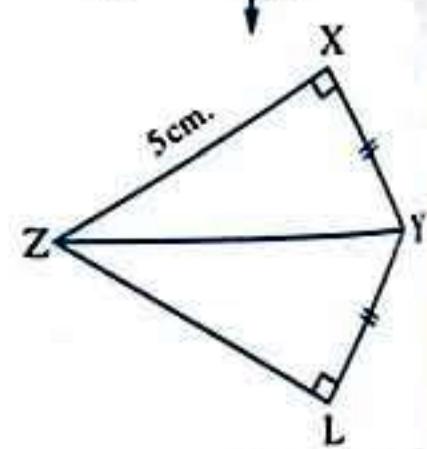
[b] In the opposite figure :

m (∠ X) = m (∠ L) = 90° , YX = YL

and ZX = 5 cm.

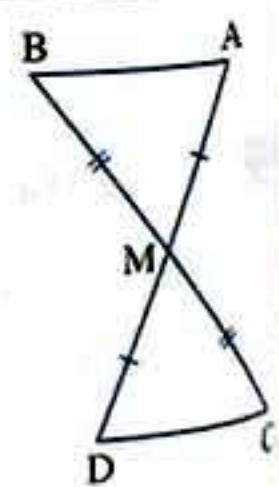Prove that : △ XYZ ≡ △ LYZ , then find : the length of $\overline{ZL}$

[c] Mention two cases of congruency of two triangles.

---

5 [a] In the opposite figure :

$\overline{AD} ∩ \overline{BC} = \{M\}$

, BM = MC , AM = MD

Prove that : △ AMB ≡ △ DMC

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Final Examinations
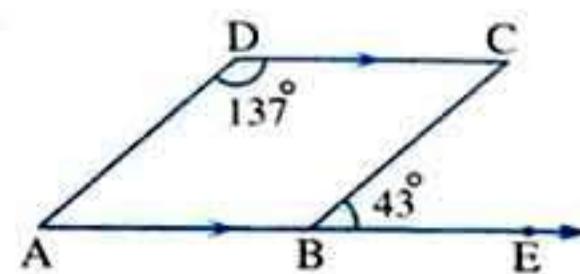
[b] In the opposite figure :

$\overrightarrow{AB}$ // $\overrightarrow{DC}$, m (∠ EBC) = 43°

, m (∠ D) = 137°

Is $\overrightarrow{BC}$ // $\overrightarrow{AD}$? Giving reason.

4 **Giza Governorate** — El-Dokki Directorate Math Inspection

Answer the following questions :

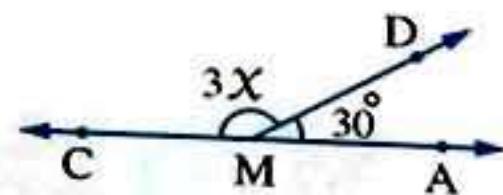**1** **Choose the correct answer :**

1 The angle whose measure is more than 180° and less than 360° is called ....

(a) obtuse.   (b) straight.   (c) reflex.   (d) acute.

2 The supplementary angle of the angle of measure 53° is an angle of measure ....

(a) 53°   (b) 37°   (c) 127°   (d) 180°

3 If △ MLN ≡ △ XYZ , then m (∠ N) = m (∠ ....)

(a) M   (b) X   (c) Z   (d) Y

4 The sum of measures of the accumulative angles at a point equals ....

(a) 180°   (b) 360°   (c) 90°   (d) 270°

5 The two angles of measures : 40° , 50° are ....

(a) complementary.   (b) supplementary.   (c) reflex.   (d) obtuse.

6 In △ XYZ , if m (∠ X) + m (∠ Z) = 95° , then m (∠ Y) = ...

(a) 180°   (b) 95°   (c) 90°   (d) 85°

2 **Complete the following :**

1 In the opposite figure :

$\overrightarrow{AC}$ ∩ $\overrightarrow{MD}$ = {M} , m (∠ AMD) = 30°

, m (∠ CMD) = 3 x , then the value of x equals ....°

2 Two triangles are congruent if two sides and .... of one triangle are congruent to the corresponding parts of the other triangle.

3 If a straight line intersects two parallel straight lines , then each two corresponding angles are ....

4 If two adjacent angles are supplementary , then their two outer sides are ....

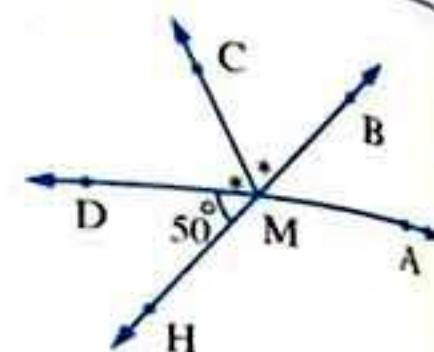**5** If m (∠ B) = 80° , then m (reflex ∠ B) = ...°

Geometry

3 **[a]** In the opposite figure :

$\overrightarrow{AD} \cap \overrightarrow{BH} = \{M\}$, m ($\angle$ HMD) = 50°
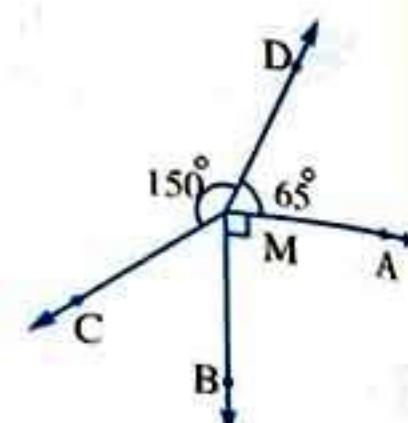
, $\overrightarrow{MC}$ bisects $\angle$ BMD

Find : m ($\angle$ AMC)
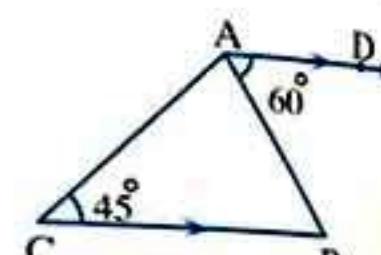
[b] In the opposite figure :

$\overrightarrow{MA} \perp \overrightarrow{MB}$, m ($\angle$ AMD) = 65°
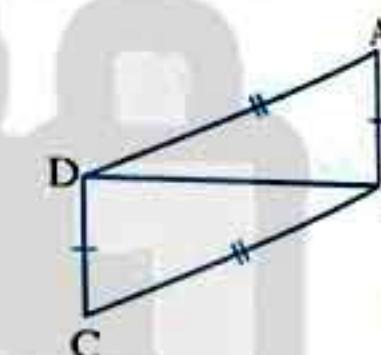
, m ($\angle$ DMC) = 150°

Find : m ($\angle$ BMC)

4 **[a]** In the opposite figure :

$\overrightarrow{AD} // \overrightarrow{CB}$, m ($\angle$ BAD) = 60° , m ($\angle$ C) = 45°

Find : m ($\angle$ BAC) , m ($\angle$ B)
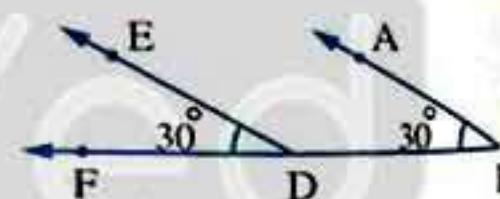
[b] In the opposite figure :

AD = BC , AB = CD

1 Is $\triangle$ ABD $\equiv$ $\triangle$ CDB ? Why ?

2 Complete : m ($\angle$ A) = m ($\angle$ ....)

5 **[a]** In the opposite figure :

m ($\angle$ B) = 30° , m ($\angle$ EDF) = 30°

Is $\overrightarrow{DE} // \overrightarrow{BA}$? Why ?

[b] Using the geometric instruments , draw $\angle$ ABC of measure 115° , then draw $\overrightarrow{BD}$ to bisect it.

(Don't remove the arcs)

5 **Giza Governorate**   Education Administration of 6 October

Answer the following questions :

1 Choose the correct answer :

1 When a transversal cuts two parallel lines , then every two .... angles are equal in measure.

(a) alternate   (b) supplementary   (c) complementary   (d) adjacent

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2 The perpendicular bisector of a line segment is called ⋯⋯⋯⋯

   (a) symmetry axis.   (b) parallel line.   (c) intersecting line. (d) median.

3 If m (∠ A) = 90° , then m (reflex ∠ A) = ⋯⋯⋯⋯

   (a) 90°   (b) 270°   (c) 180°   (d) 0°

4 The measure of the straight angle equals ⋯⋯⋯⋯

   (a) 0°   (b) 90°   (c) 180°   (d) 270°

5 The angle whose measure is 179° , is ⋯⋯⋯⋯ angle.

   (a) an acute   (b) a right   (c) an obtuse   (d) a straight

6 If ∠ X ≡ ∠ Y and ∠ X , ∠ Y are supplementary angles , then m (∠ X) = ⋯⋯⋯⋯

   (a) 45°   (b) 90°   (c) 135°   (d) 180°

2 **Complete :**
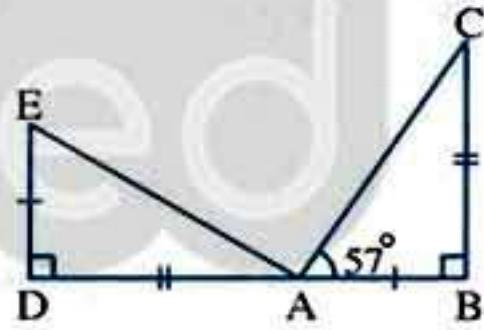
1 The angle whose measure is 36° complements an angle of measure ⋯⋯⋯⋯°
and supplements an angle of measure ⋯⋯⋯⋯°

2 The two right-angled triangles are congruent if ⋯⋯⋯⋯

3 If △ ABC ≡ △ XYZ , then m (∠ A) = m (∠ ⋯⋯⋯⋯) , and XY = ⋯⋯⋯⋯

4 The sum of measures of the accumulative angles at a point equals ⋯⋯⋯⋯°

5 The angle whose measure is greater than 180° and less than 360° is called ⋯⋯⋯⋯

3 **[a] In the opposite figure :**

   AB = DE

   , BC = AD , m (∠ CAB) = 57°

   Find the measures of the unknown angles in the triangle ADE
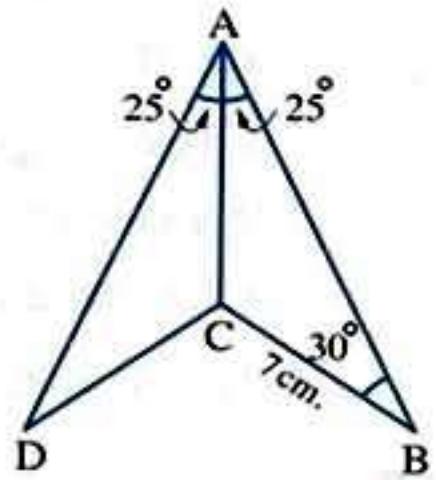
[b] In the opposite figure :

   If △ ACB ≡ △ ACD , complete :

   1 m (∠ D) = ⋯⋯⋯⋯°

   2 CD = ⋯⋯⋯⋯ cm.
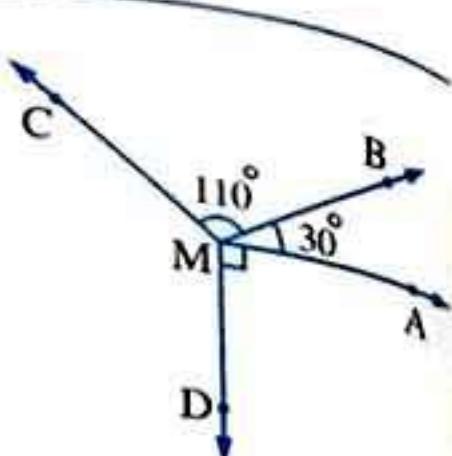
   3 m (∠ ACD) = ⋯⋯⋯⋯°

4 **[a]** Draw the angle ABC where m (∠ ABC) = 70° , then using the ruler and the compasses
   , draw $\overrightarrow{BD}$ to bisect the angle.   (Don't remove the arcs)

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Geometry

[b] In the opposite figure :

m (∠ AMB) = 30°

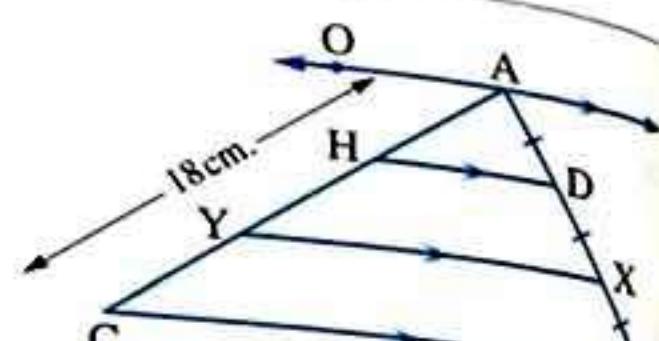, m (∠ BMC) = 110°

and m (∠ AMD) = 90°

Find : m (∠ CMD)

5 [a] In the opposite figure :

$\overrightarrow{AO}$ // $\overrightarrow{HD}$ // $\overrightarrow{YX}$ // $\overrightarrow{CB}$

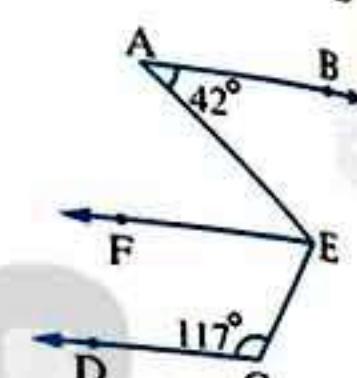, AD = DX = XB and AC = 18 cm.

Find : The length of $\overline{AY}$

[b] In the opposite figure :

$\overrightarrow{AB}$ // $\overrightarrow{CD}$, $\overrightarrow{EF}$ // $\overrightarrow{CD}$

, m (∠ A) = 42° and m (∠ C) = 117°

Determine : m (∠ AEC)

6 Alexandria Governorate

El-Montaza Educational Zone Maths Supervision

Answer the following questions :

1 Complete :

1 The angle of measure .... complements an angle of measure 25°

2 The sum of measures of the accumulative angles at a point is equal to ....°

3 In the opposite figure :
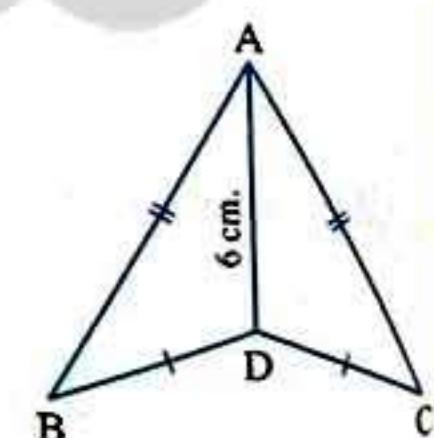
If the perimeter of the shape ABDC = 20 cm.

and the length of $\overline{AD}$ = 6 cm.

, then the perimeter of △ ABD = ... cm.

4 If a straight line intersects two parallel straight lines , then every two corresponding angles are .... in measure.

5 An angle has a measure of 120° , then the measure of its reflex angle is ....°

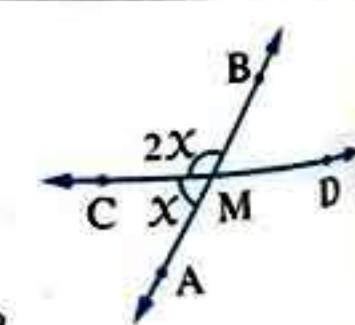**2 Choose the correct answer :**

1 In the opposite figure :

If $\overrightarrow{AB} \cap \overrightarrow{CD}$ = {M} , then x = ...

(a) 30°

(b) 45°

(c) 60°

(d) 90°

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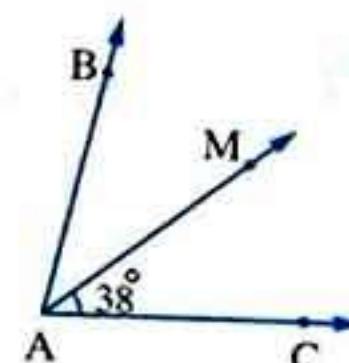
Final Examinations
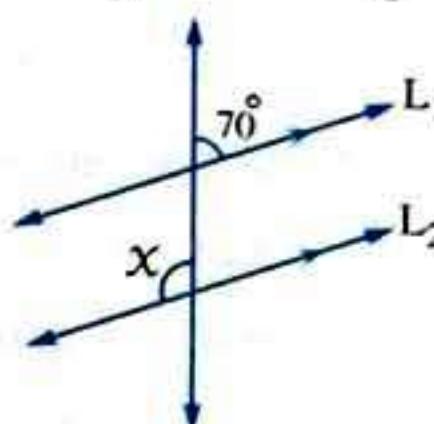
2 If m (∠ B) = 38° , then its supplementary angle is of measure ....
- (a) 52°
- (b) 142°
- (c) 228°
- (d) 322°

3 In the opposite figure :

$\overrightarrow{AM}$ bisects ∠ BAC , then m (∠ BAC) = ...
- (a) 38°
- (b) 76°
- (c) 142°
- (d) can't be calculated.
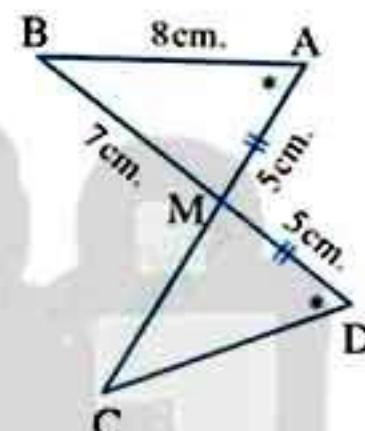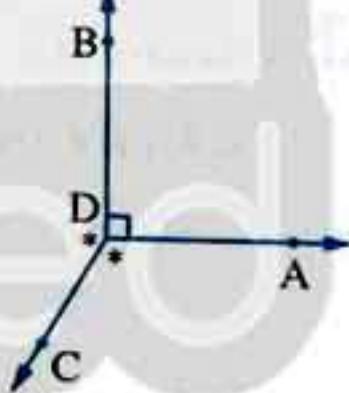
4 In the opposite figure :

x = ...
- (a) 70°
- (b) 90°
- (c) 110°
- (d) 290°
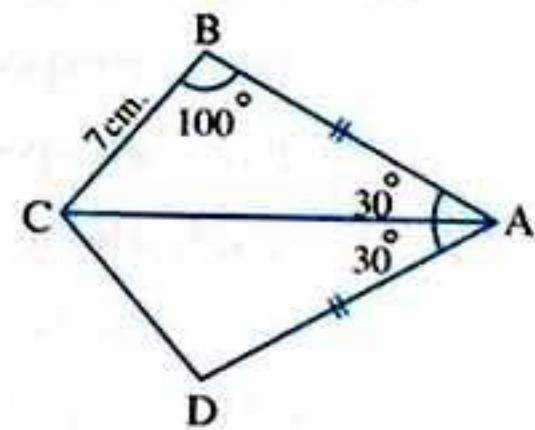
5 In the opposite figure :

$\overline{AC} \cap \overline{BD}$ = {M} , AM = MD = 5 cm.

and m (∠ A) = m (∠ D) , then CD = ... cm.
- (a) 5
- (b) 7
- (c) 8
- (d) 12

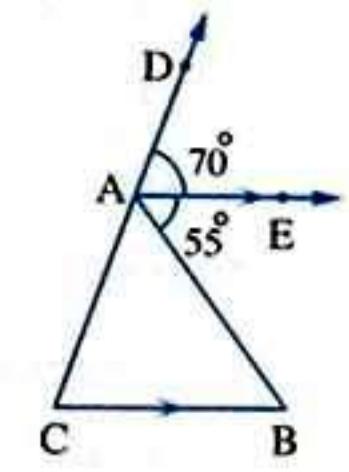**8** [a] In the opposite figure :

m (∠ ADB) = 90°

, $\overrightarrow{DC}$ bisects the reflex angle BDA

Calculate : m (∠ BDC)

[b] In the opposite figure :

AB = AD , BC = 7 cm. , m (∠ B) = 100°

and m (∠ BAC) = m (∠ DAC) = 30°

1 Is Δ BAC ≡ Δ DAC ? Why ?

2 Find : m (∠ ACD) and the length of $\overline{CD}$

7 [a] In the opposite figure :

ABC is a triangle where the point A ∈ $\overleftrightarrow{CD}$

, $\overrightarrow{AE}$ // $\overleftrightarrow{CB}$, m (∠ DAE) = 70°

and m (∠ EAB) = 55°

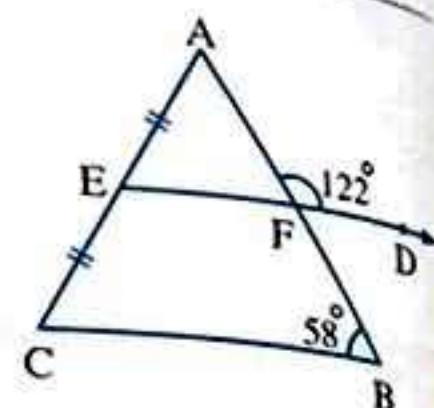Calculate the measure of each angle in the triangle ABC

Geometry

[b] Draw a line segment $\overline{AB}$ of length 8 cm. , then draw its line of symmetry.
(perpendicular bisector of it)

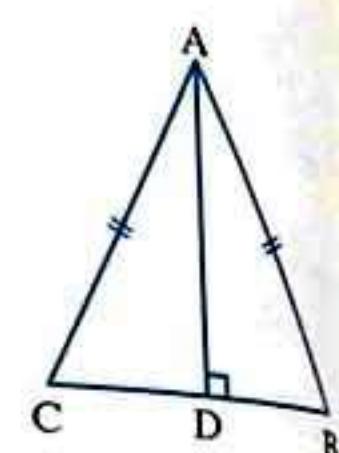(Don't remove the arcs)

5 [a] In the opposite figure :

ABC is a triangle , E is the midpoint of $\overline{AC}$
, $\overrightarrow{EF}$ intersects $\overline{AB}$ at F , m ($\angle$ AFD) = 122°
and m ($\angle$ B) = 58°
Is $\overrightarrow{EF}$ // $\overline{CB}$? Why ?

[b] In the opposite figure :

ABC is an isosceles triangle
and $\overline{AD} \perp \overline{BC}$

Why does m ($\angle$ C) = m ($\angle$ B) ?

7 Alexandria Governorate

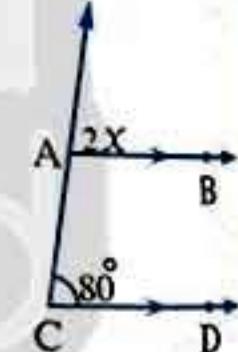East Educational Zone
Inspectorate of Mathematics

Answer the following questions :

1 Choose the correct answer :

1 In the opposite figure :

m ($\angle$ C) = 80° , $\overrightarrow{AB}$ // $\overrightarrow{CD}$, then x = ...
(a) 80°   (b) 50°   (c) 40°   (d) 100°

2 Two triangles are congruent if .... are congruent.

(a) two corresponding sides

(b) two corresponding sides and the included angle

(c) a side and an angle with their corresponding

(d) their corresponding angles

3 If $\triangle$ ABC $\equiv$ $\triangle$ XYZ , then BC = ...

(a) XY   (b) AB   (c) XZ   (d) YZ

4 The acute angle supplements .... angle.

(a) an acute   (b) a right   (c) an obtuse   (d) a straight

5 If two straight lines intersects , then each two .... angles have the same measure.

(a) vertically opposite   (b) adjacent

(c) alternate   (d) corresponding

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6 The image of the point $(-3, 5)$ by translation $(0, -10)$ is ....

— Final Examinations

(a) $(3, -5)$
(b) $(-3, -5)$
(c) $(3, 5)$
(d) $(5, -3)$

2 Complete each of the following :

1 If a straight line intersects two parallel straight lines , then each two alternate angles are ....

2 If the ratio between the measures of two supplementary angles is $1 : 2$, then the measure of the smaller angle equals ....°

3 If $\angle A \equiv \angle B$, then $m(\angle A) - m(\angle B) =$ ....

4 The perpendicular bisector of a line segment is called ....

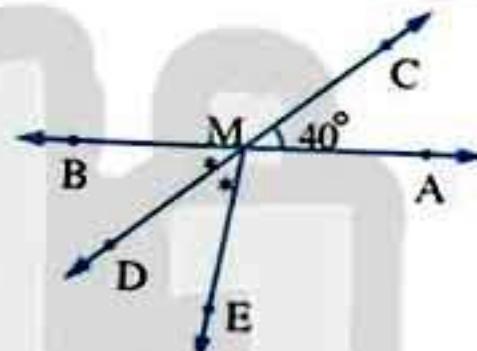**5** The square has .... axes of symmetry.

3 [a] In the opposite figure :

$\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$, $m(\angle AMC) = 40°$

and $\overrightarrow{MD}$ bisects $\angle BME$
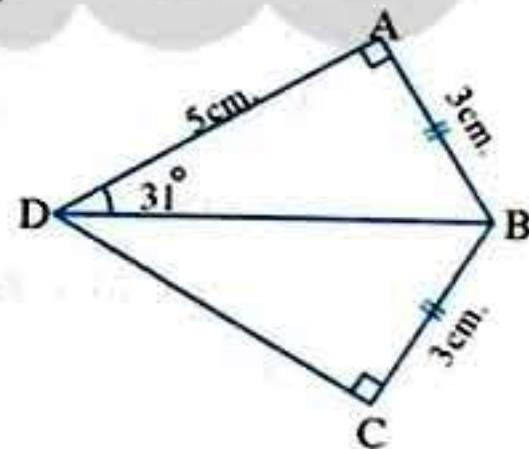
Find : $m(\angle AME)$

[b] Using the ruler and the compasses , draw $\triangle ABC$ in which $AB = AC = 6$ cm. , $BC = 5$ cm. Bisect $\angle B$, $\angle C$ by two bisectors which intersect at M
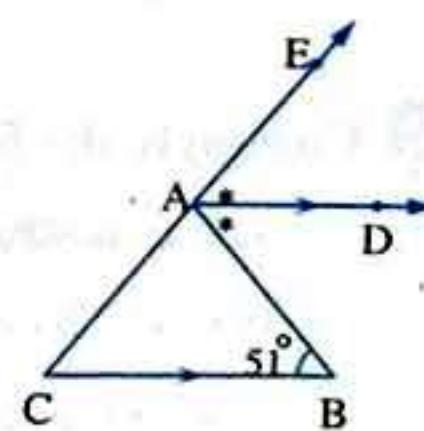
(Don't remove the arcs)

4 [a] In the opposite figure :

$m(\angle BAD) = m(\angle BCD) = 90°$

, $m(\angle ADB) = 31°$, $AB = CB = 3$ cm. , $AD = 5$ cm.

1 Is $\triangle ABD \equiv \triangle CBD$? Why ?

2 Find : The length of $\overline{CD}$

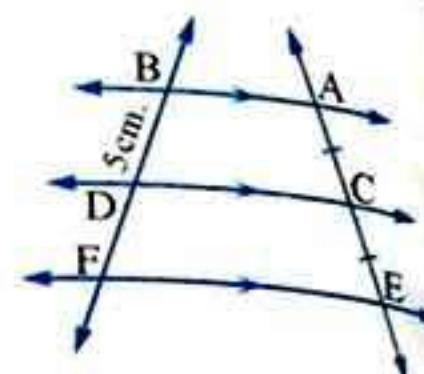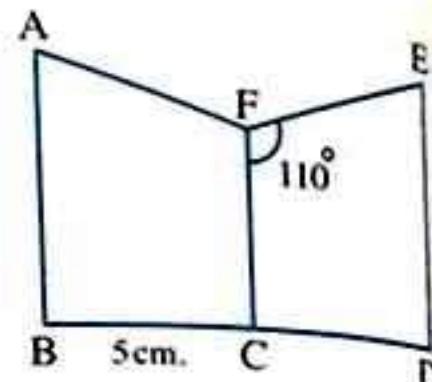**3** Find : $m(\angle ADC)$

[b] In the opposite figure :

$\overrightarrow{AD} \parallel \overline{BC}$

, $\overrightarrow{AD}$ bisects $\angle EAB$

, $m(\angle ABC) = 51°$

Find : $m(\angle BAD)$ and $m(\angle C)$

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Geometry

5 **[a]** In the opposite figure :

$\overrightarrow{AB} // \overrightarrow{CD} // \overrightarrow{EF}$, AC = CE , DB = 5 cm.

Find : The length of $\overline{BF}$

, by giving the reason.

[b] In the opposite figure :

The polygon ABCF ≡ the polygon EDCF

, m (∠ EFC) = 110° , BC = 5 cm.

Find : **1** m (∠ AFC) , m (∠ AFE) , m (∠ FCB)

2 The length of $\overline{BD}$

8 El-Kalyoubia Governorate   Directorate of Education Math Supervision

Answer the following questions :

1 **Choose the correct answer from those given :**

1 If two straight lines intersect , then each two ·············· angles have the same measure.

(a) corresponding (b) alternate   (c) adjacent   (d) vertically opposite

2 If two straight lines are perpendicular to a third , then the two straight lines are ·············

(a) intersecting. (b) perpendicular. (c) parallel.   (d) coincident.

3 The rectangle has ·············· lines of symmetry.

(a) zero   (b) 2   (c) 3   (d) 4

4 If △ ABC ≡ △ LMN , then m (∠ BCA) = m (∠ ··············)

(a) MNL   (b) MLN   (c) NML   (d) NLM

5 If $\overline{AB}$ ≡ $\overline{CD}$, then AB − CD = ··············

(a) 1   (b) 2   (c) zero   (d) 5

6 Any two line segments are congruent if they are equal in ··············

(a) measure.   (b) capacity.   (c) weight.   (d) length.

2 **Complete the following :**

1 The two straight lines parallel to a third are ··············

2 If m (∠ B) = 110° , then m (reflex ∠ B) = ··············°

3 The two adjacent angles formed by intersecting of a straight line and a ray are ··············

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Final Examinations

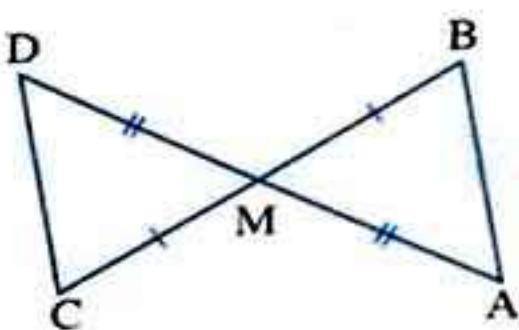**4** The two right-angled triangles are congruent if ············

5 A square of side length 7 cm. , then its area = ············ cm².

3 [a] In the opposite figure :

$\overline{AD} \cap \overline{BC} = \{M\}$, MB = MC , MA = MD

Write the conditions for △ AMB and △ DMC to be

congruent :

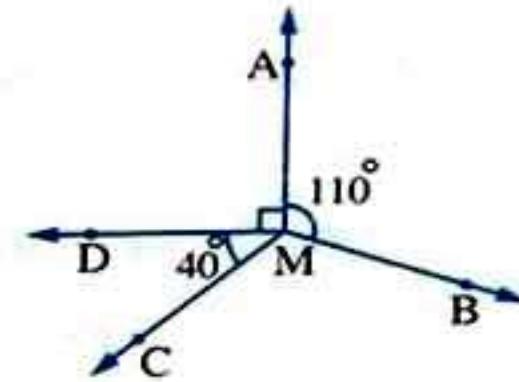1 ············   2 ············   3 ············

[b] Using the opposite figure , complete :

1 m (∠ AMB) + m (∠ BMC)

+ m (∠ CMD) + m (∠ DMA) = ············°

2 m (∠ BMC) = ············ − ············

= ············°
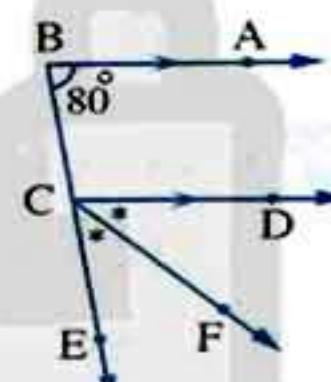
4 [a] In the opposite figure :

$\overrightarrow{BA} \parallel \overrightarrow{CD}$, m (∠ B) = 80° , $\overrightarrow{CF}$ bisects ∠ DCE

Complete :

1 m (∠ DCE) = m (∠ ············) = ············°

2 m (∠ ECF) = ············°
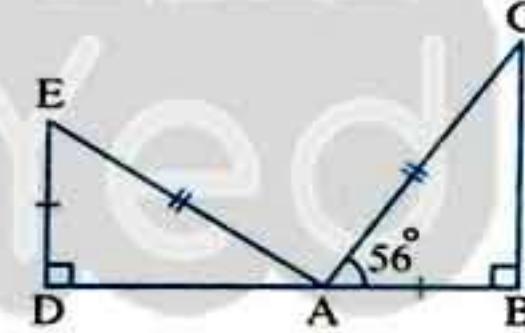
[b] Using the opposite figure , complete :

1 △ ABC ≡ △ EDA

because ············ , ············ , ············

2 m (∠ EAD) = ············°
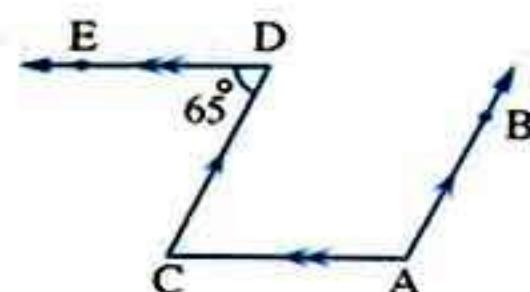
5 [a] In the opposite figure :

$\overrightarrow{DE} \parallel \overline{AC}$, $\overrightarrow{AB} \parallel \overrightarrow{CD}$, m (∠ D) = 65°

Complete :

1 m (∠ C) = m (∠ ············) = ············°

2 m (∠ A) = ············° because ············

[b] By using your geometric instruments , draw $\overline{AB}$, where AB = 8 cm. and draw the axis of symmetry of $\overline{AB}$

(Don't remove the arcs).

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Geometry

9 El-Sharkia Governorate — Hehia Exp. Lang. School — Department : Math's

Answer the following questions :
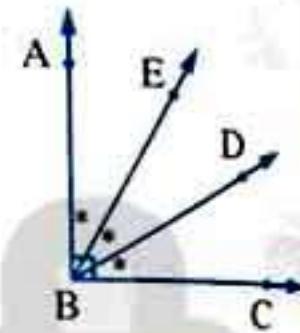
1 **Complete each of the following :**

1. The angle whose measure is 30° complements an angle of measure ………°

2. If △ ABC ≡ △ XYZ , m (∠ A) + m (∠ B) = 110° , then m (∠ Z) = ………°

3. If m (∠ A) = 140° , then m (reflex ∠ A) = ………°

4. If a straight line cuts two parallel straight lines , then each two corresponding angles are ………

5. In the opposite figure :

   If $\overrightarrow{BA} \perp \overrightarrow{BC}$

   , then m (∠ CBD) = ………°

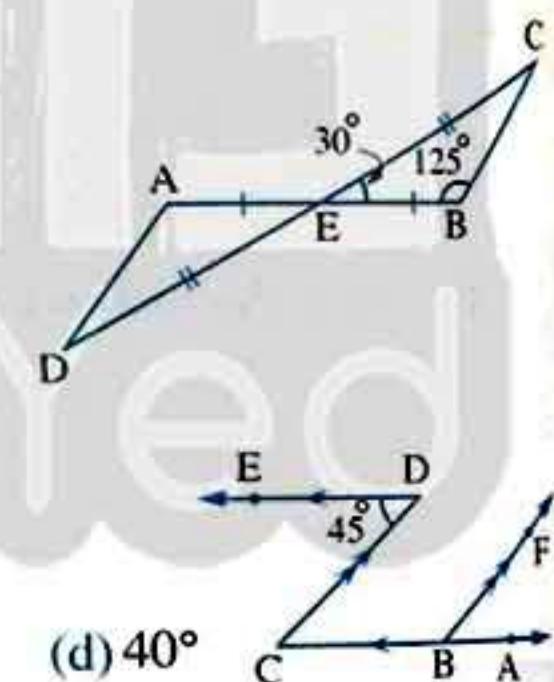**2** **Choose the correct answer :**

1. In the opposite figure :

   m (∠ D) = …………

   (a) 25° (b) 30°

   (c) 60° (d) 125°

2. In the opposite figure :

   m (∠ ABF) = …………

   (a) 45° (b) 90° (c) 135° (d) 40°

3. The angle of measure 98° its type is …………

   (a) acute. (b) right. (c) obtuse. (d) straight.

4. The sum of measures of the accumulative angles at a point equals …………

   (a) 90° (b) 180° (c) 630° (d) 360°

5. If m (∠ A) = 2 m (∠ B) , ∠ A supplements ∠ B , then m (∠ B) = …………

   (a) 30° (b) 60° (c) 90° (d) 120°

6. The obtuse angle supplements ………… angle.
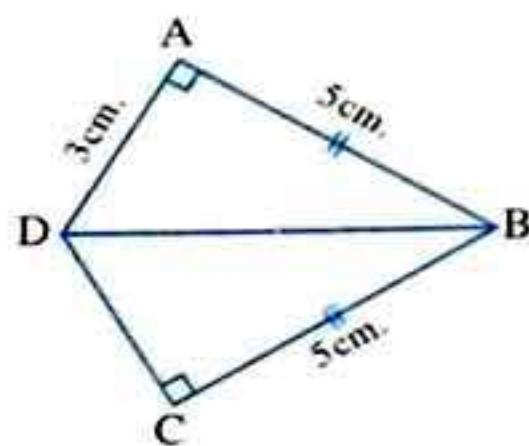
   (a) an acute (b) an obtuse (c) a zero (d) a right

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Final Examinations

3 [a] In the opposite figure :

m (∠ BAD) = m (∠ BCD) = 90°
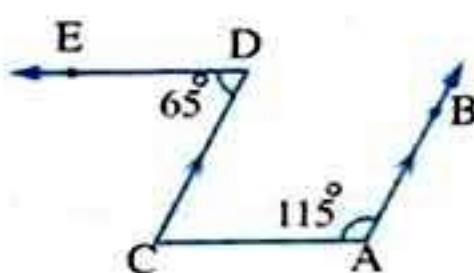
, AB = CB = 5 cm. , AD = 3 cm.

Mention the conditions for △ ABD , △ CBD

to be congruent

, then find : The length of $\overline{CD}$

[b] In the opposite figure :

If $\overrightarrow{AB}$ // $\overrightarrow{CD}$, m (∠ D) = 65° , m (∠ A) = 115°

, then prove that : $\overrightarrow{AC}$ // $\overrightarrow{DE}$

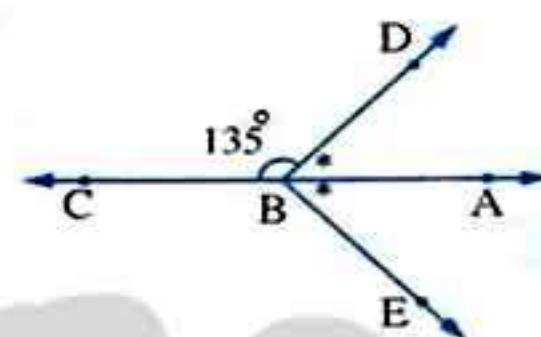**4** [a] In the opposite figure :

If B ∈ $\overleftrightarrow{AC}$, m (∠ DBC) = 135°
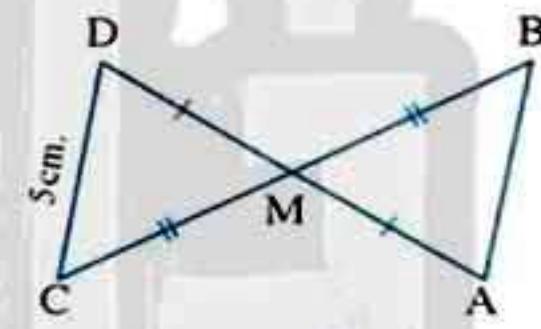
and $\overrightarrow{BA}$ bisects ∠ DBE

, find :

1 m (∠ ABD)   2 m (∠ DBE)   3 m (∠ CBE)

[b] From the opposite figure , complete :

1 △ ABM ≡ △ ....

2 AB = ... cm.

3 m (∠ B) = m (∠ ....)
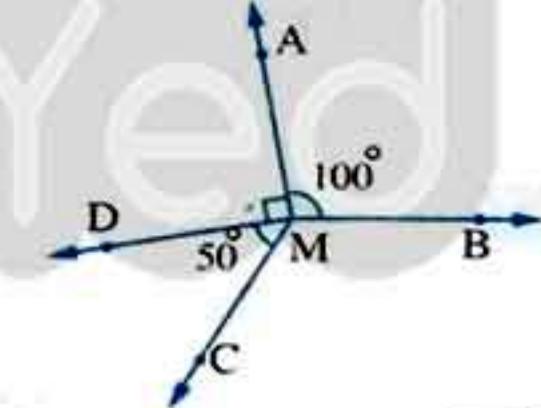
5 [a] In the opposite figure :

m (∠ BMA) = 100°

, m (∠ AMD) = 90°

, m (∠ DMC) = 50°

Find with steps : m (∠ BMC)

[b] Draw the line segment AB of length 8 cm. , then construct the axis of symmetry of $\overline{AB}$
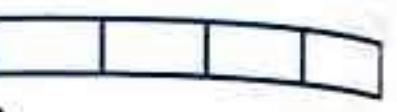
(Don't remove the arcs)

(10) El-Monofia Governorate — Shiben Elkom Directorate Supervisor of Math
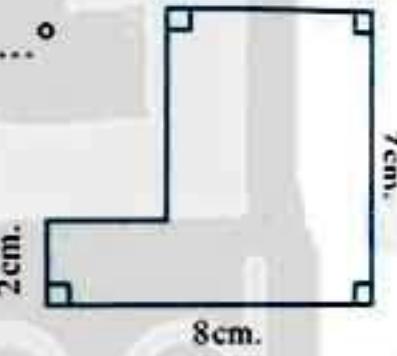
Answer the following questions :

1 Choose the correct answer :

1 If m (∠ A) = 130° , then m (reflex ∠ A) = ...

(a) 130°   (b) 50°   (c) 285°   (d) 230°

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Geometry

2 If the triangle ABC ≡ the triangle XYZ , then $\overline{AC}$ ≡ ....

(a) $\overline{AB}$ (b) $\overline{XY}$ (c) $\overline{YZ}$ (d) $\overline{XZ}$

3 If two adjacent angles are supplementary , then their outer sides are ....

(a) perpendicular .

(b) coincident.

(c) skew.

(d) on the same straight line.

4 If the perimeter of a square is 24 cm. , then its area is ....

(a) 8 cm².   (b) 9 cm².   (c) 3 cm².   (d) 36 cm².

5 In the opposite figure : The number of rectangles = ...

(a) 4   (b) 6   (c) 8   (d) 10

6 If L // M , L // N , then the two straight lines M and N are ....

(a) perpendicular.   (b) parallel.   (c) intersecting.   (d) congruent.

2 **Complete :**

1 Two triangles are congruent if two sides and .... congruent with the corresponding parts from the other triangle.

2 If a straight line cuts two straight lines and two corresponding angles are equal in measure , then the two straight lines are ....

3 The angle of measure 50° complements an angle of measure ....°

4 Two angles are congruent if ....

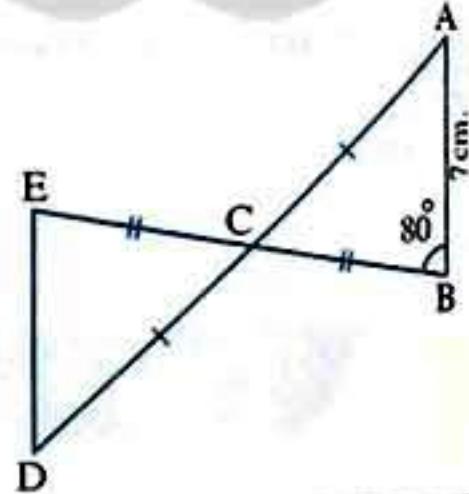**5** The perimeter of the opposite figure equals .... cm.

3 **[a]** Use the geometric instruments to draw ∠ ABC of measure 125° , then bisect it. (Don't remove the arcs)

[b] In the opposite figure :

$\overline{AD} \cap \overline{BE} = \{C\}$, AC = CD
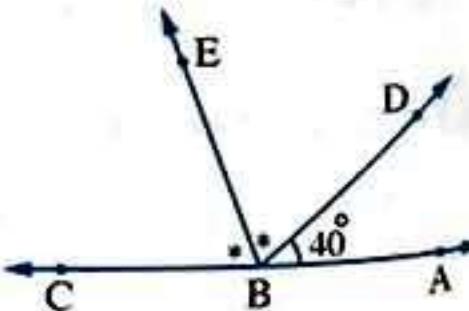
, BC = CE , AB = 7 cm. , m (∠ B) = 80°

1 Is △ ABC ≡ △ DEC ? Why ?

2 **Find :** The length of $\overline{ED}$, m (∠ E)

4 **[a]** In the opposite figure :

$B \in \overrightarrow{AC}$

, $\overrightarrow{BE}$ bisects ∠ DBC , m (∠ ABD) = 40°

Find : m (∠ DBC) , m (∠ ABE)

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[b] In the opposite figure :
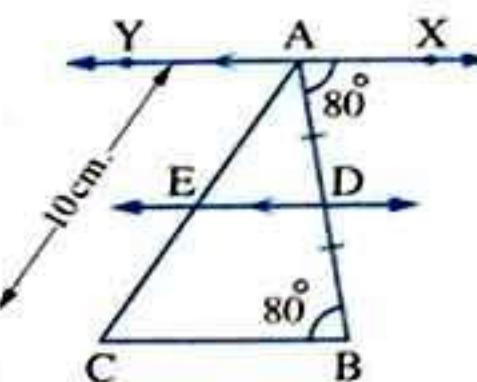
$\overrightarrow{XY}$ // $\overrightarrow{DE}$

, m (∠ XAB) = 80° , m (∠ B) = 80°

, AD = BD , AC = 10 cm.

Is $\overrightarrow{DE}$ // $\overrightarrow{BC}$? Why ?

Find : The length of $\overline{AE}$, give reason
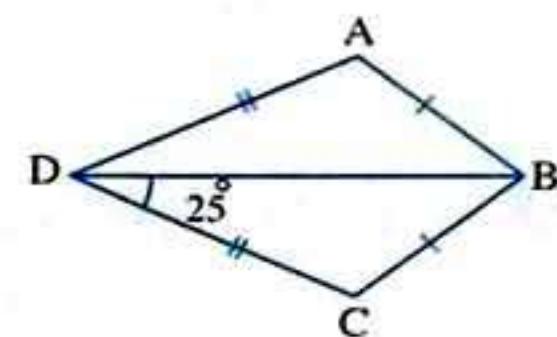
5 [a] In the opposite figure :

AB = CB , AD = CD

, m (∠ CDB) = 25°

Is △ ABD ≡ △ CBD ? Why ?

Find : m (∠ ADC)
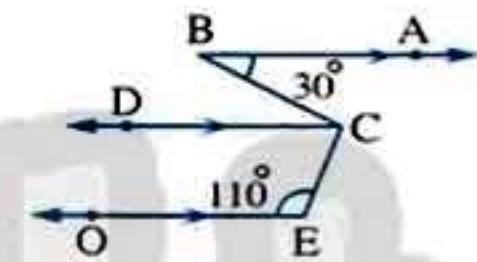
[b] In the opposite figure :

$\overrightarrow{BA}$ // $\overrightarrow{CD}$ // $\overrightarrow{EO}$

, m (∠ ABC) = 30°

, m (∠ CEO) = 110°

Find : m (∠ BCE)

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(11) El-Gharbia Governorate

The central Maths Supervision
Official Language Schools

Answer the following questions :

1 Choose the correct answer :

1 If m (∠ A) = 65° , then m (reflex ∠ A) = ··············

(a) 305°   (b) 295°   (c) 25°   (d) 115°

2 The acute angle complements ·············· angle.

(a) a right   (b) an obtuse   (c) an acute   (d) a straight

3 ABCD is a rectangle , then $\overline{AC}$ ≡ ··············

(a) $\overline{BD}$ (b) $\overline{AD}$ (c) $\overline{DC}$ (d) $\overline{BC}$

4 The sum of measures of the accumulative angles at one point equals ··············

(a) 90°   (b) 180°   (c) 270°   (d) 360°

5 If ∠ X supplements ∠ Y and m (∠ X) = $\frac{1}{2}$ m (∠ Y) , then m (∠ Y) = ··············

(a) 30°   (b) 45°   (c) 60°   (d) 120°

6 The two straight lines parallel to a third straight line are ··············

(a) intersecting.   (b) parallel.   (c) coincident.   (d) perpendicular.

Geometry

2 **Complete each of the following :**

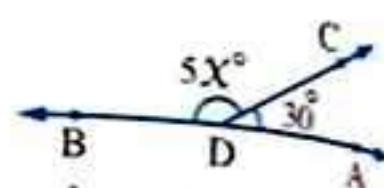**1** The angle whose measure is more than 90° and less than 180° is ....

2 Two angles are congruent if ....

3 If two adjacent angles are complementary , then their outer sides are ....

4 In the opposite figure :

m (∠ ADC) = 30° and m (∠ BDC) = 5 X , then X = ...

5 If a straight line intersects two parallel straight lines , then each two alternate angles are ....
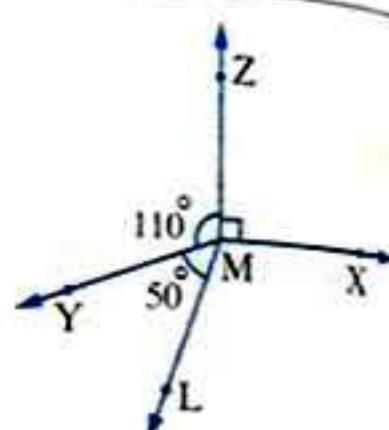
3 **[a]** In the opposite figure :

m (∠ XMZ) = 90°

, m (∠ ZMY) = 110°

and m (∠ YML) = 50°

Find by steps : m (∠ XML)
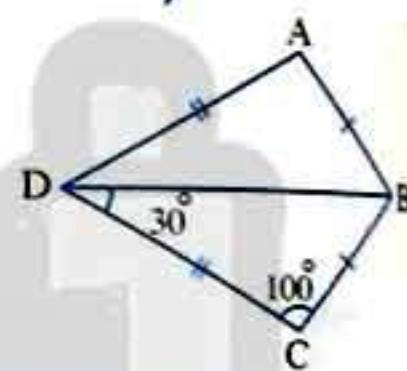
[b] In the opposite figure :

AB = CB , AD = CD , m (∠ C) = 100°

and m (∠ BDC) = 30° Is △ ABD ≡ △ CBD ? Why ?

, then find : m (∠ ABD) (Write the steps)
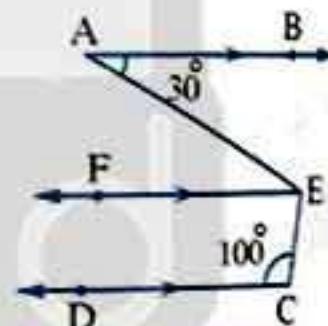
4 **[a]** In the opposite figure :

m (∠ C) = 100° , m (∠ A) = 30°

, $\overrightarrow{AB}$ // $\overrightarrow{EF}$ // $\overrightarrow{CD}$

Find by steps : m (∠ AEC)

[b] Draw ∠ ABC of measure 80° , then using the ruler and compasses bisect ∠ B

(Don't remove the arcs)
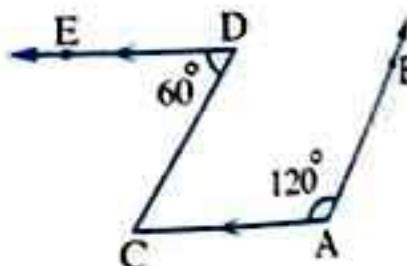
5 **[a]** In the opposite figure :

$\overrightarrow{DE}$ // $\overrightarrow{AC}$, m (∠ A) = 120° , m (∠ D) = 60°

1 Find : m (∠ C)

2 Is $\overrightarrow{AB}$ // $\overrightarrow{CD}$? Why ?
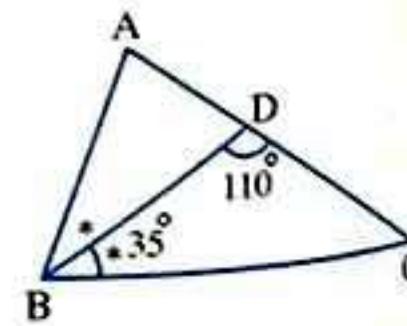
[b] In the opposite figure :

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 110°

Find by steps : m (∠ C) and m (∠ A)

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Final Examinations

(12) Ismailia Governorate

Directorate of Education
Al-Manar Language School

Answer the following questions :

1 Choose the correct answer :

1 If △ ABC ≡ △ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ⋯⋯⋯⋯

(a) 50°   (b) 80°   (c) 90°   (d) 100°

2 If ∠ M ≡ ∠ N and ∠ M , ∠ N are supplementary angles , then m (∠ M) = ⋯⋯⋯⋯

(a) 180°   (b) 45°   (c) 360°   (d) 90°

3 The sum of the measures of the accumulative angles at a point is ⋯⋯⋯⋯ right angles.

(a) 360   (b) 2   (c) 4   (d) 630

4 If two straight lines are parallel to a third straight line , then they are ⋯⋯⋯⋯

(a) perpendicular.   (b) parallel.   (c) coincident.   (d) intersecting.

5 The measure of the complement of an angle of measure 20° is ⋯⋯⋯⋯

(a) 70°   (b) 180°   (c) 90°   (d) 160°

6 The type of the angle of measure 185° is ⋯⋯⋯⋯ angle.

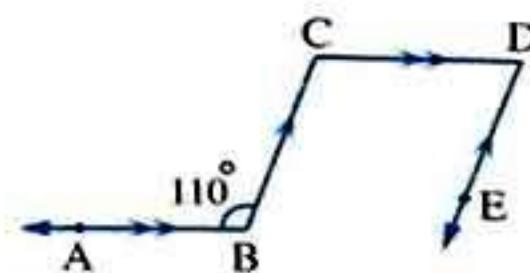(a) an acute.   (b) a reflex.   (c) an obtuse.   (d) a straight.

2 Complete :

1 If △ ABC ≡ △ XYZ , then AC – XZ = ⋯⋯⋯⋯

2 The two adjacent angles formed by intersecting of a straight line and a ray are ⋯⋯⋯⋯

3 If a straight line intersects two parallel lines , then each two corresponding angles are ⋯⋯⋯⋯

4 Two triangles are congruent if two sides and the ⋯⋯⋯⋯ angle of one of them are congruent to their corresponding parts of the other.

5 The right angle supplements an angle of measure ⋯⋯⋯⋯°

3 [a] In the opposite figure :

$\overrightarrow{BA}$ // $\overrightarrow{CD}$, $\overrightarrow{CB}$ // $\overrightarrow{DE}$
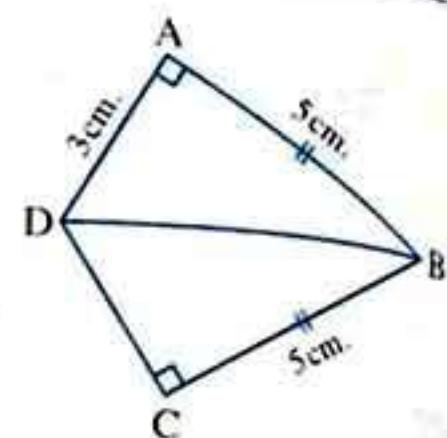
, m (∠ B) = 110°

Find : m (∠ D)

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Geometry

[b] In the opposite figure :

m (∠ A) = m (∠ C) = 90°

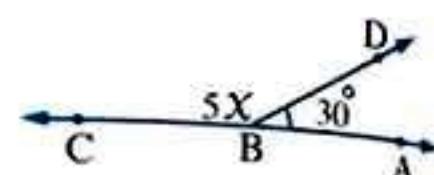, AB = BC = 5 cm. , AD = 3 cm.

  1 Mention the conditions for Δ ABD , Δ CBD to be congruent.

  2 **Find :** The length of $\overline{CD}$
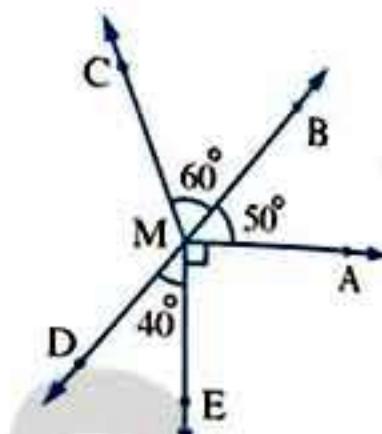
4 **[a]** In the opposite figure :

$\overrightarrow{AC} \cap \overrightarrow{BD} = \{B\}$

, m (∠ ABD) = 30°

, m (∠ DBC) = 5 x

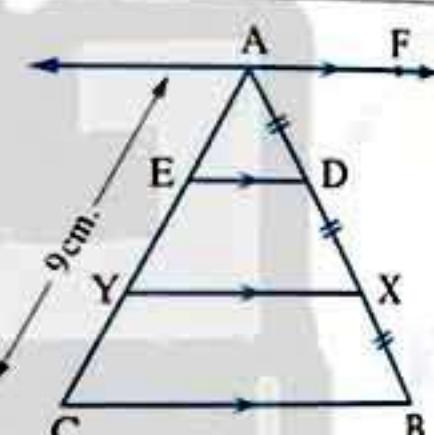**Find in degrees :** The value of x

[b] In the opposite figure :

m (∠ AME) = 90° , m (∠ AMB) = 50°

, m (∠ BMC) = 60° , m (∠ DME) = 40°

Find : m (∠ DMC)

5 **[a]** In the opposite figure :

$\overrightarrow{AF} \parallel \overrightarrow{ED} \parallel \overrightarrow{YX} \parallel \overrightarrow{CB}$

, AD = DX = XB

, AC = 9 cm.

Find : The length of $\overline{AY}$

[b] Using the geometric tools , draw ∠ ABC whose measure is 120° , then draw the bisector of ∠ ABC

13 Damietta Governorate   Damietta Education Zone Inspector of Math

Answer the following questions :

1 **Choose the correct answer :**

  1 The angle of measure 95° 60 is supplementary to an angle of measure ··············°

    (a) 75   (b) 84   (c) 90   (d) 100

  2 The triangle whose perimeter is 12 cm. and the lengths of its two sides are 2 cm. , 5 cm. , is called ··············

    (a) isosceles.   (b) equilateral.   (c) right.   (d) scalene.

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3 The two vertically opposite angles are ....
(a) corresponding.   (b) congruent.   (c) supplementary.   (d) alternate.

4 If $\overline{AB}$, $\overline{CD}$ are congruent , then AB – CD = ...
(a) zero   (b) 1   (c) 2   (d) 3

5 If the two triangles ABC , XYZ are congruent , m ($\angle$ X) = 50° and m ($\angle$ Z) = 60° , then m ($\angle$ B) = ...°
(a) 50   (b) 60   (c) 70   (d) 110

6 If two straight lines are parallel to a third , then they are ....
(a) perpendicular.   (b) parallel.   (c) coincident.   (d) intersecting.

2 Complete :

1 The perpendicular straight line to a line segment from its midpoint , is called ....

2 If a straight line cuts two parallel straight lines , then each two alternate angles are ....

3 If m ($\angle$ B) = 115° , then m (reflex $\angle$ B) = ...°

4 The two adjacent angles resulting from intersection of a ray and a straight line are ....

5 If the triangle ABC $\equiv$ the triangle XYZ , then m ($\angle$ C) = m ($\angle$ ....)

3 [a] Draw $\overrightarrow{AB}$ of length 6 cm. , then draw its axis of symmetry by using geometrical tools.
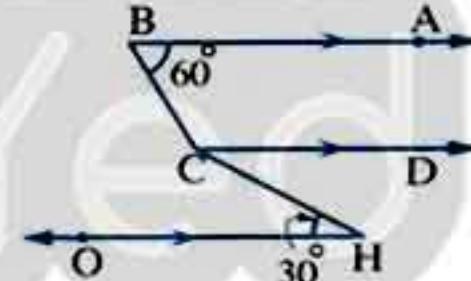(Don't remove the arcs)

[b] In the opposite figure :
$\overrightarrow{BA}$ // $\overrightarrow{CD}$ // $\overrightarrow{HO}$
, m ($\angle$ H) = 30°
, m ($\angle$ B) = 60°
Find : m ($\angle$ BCH) , give reason.

4 [a] In the opposite figure :
$\overrightarrow{CD}$ // $\overrightarrow{BA}$, m ($\angle$ C) = 90°
, $\overrightarrow{BH}$ bisects $\angle$ ABO
Find : m ($\angle$ OBH) , give reason.
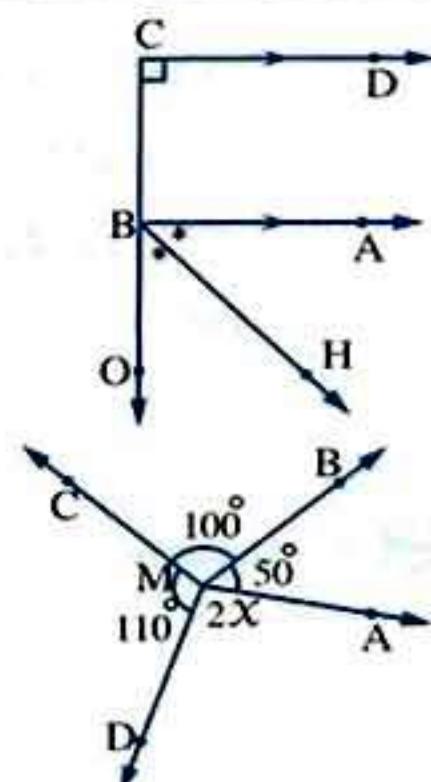
[b] In the opposite figure :
m ($\angle$ AMB) = 50°
, m ($\angle$ BMC) = 100°
, m ($\angle$ CMD) = 110°
, m ($\angle$ AMD) = 2 x
Find : The value of x , give reason.

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Geometry

5 **[a]** Mention two cases of congruency of two triangles.
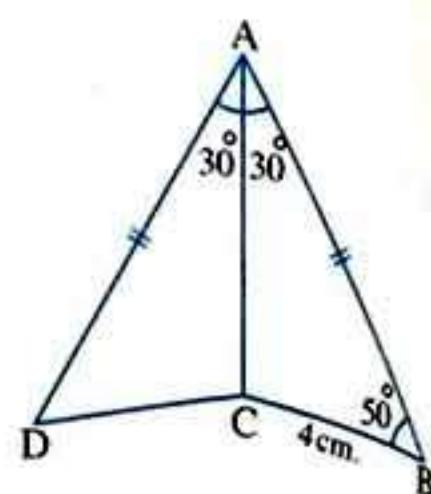
[b] In the opposite figure :

If AB = AD , BC = 4 cm.

, m (∠ B) = 50°

, m (∠ BAC) = m (∠ DAC) = 30°

Are the two triangles BAC and DAC congruent ?

Write the conditions and the results.

, then find : m (∠ D) , the length of $\overline{CD}$

14 **Beni Suef Governorate**   Directorate of Official Language Schools

Answer the following questions :

1 **Choose the correct answer :**

1 Two complementary angles are two angles whose sum of their measures is ⋯⋯⋯⋯

(a) 45°   (b) 90°   (c) 100°   (d) 180°

2 In the opposite figure :

If $\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$, m (∠ AMD) = 150°

and m (∠ CMB) = 3 X , then the value of X = ⋯⋯⋯⋯

(a) 25°   (b) 50°   (c) 100°   (d) 150°

3 If △ ABC ≡ △ XYZ , then AC = ⋯⋯⋯⋯

(a) BC   (b) YZ   (c) XZ   (d) XY

4 If two straight lines are parallel to a third straight line , then these two straight lines are ⋯⋯⋯⋯ to each other.

(a) intersecting   (b) perpendicular   (c) coincident   (d) parallel

5 The angle of measure 179° is ⋯⋯⋯⋯ angle.

(a) an acute   (b) a right   (c) an obtuse   (d) a straight

6 $\overrightarrow{AB}$ ⋯⋯⋯⋯ $\overrightarrow{AB}$

(a) ∈   (b) ∉   (c) ⊂   (d) ⊄

2 **Complete :**

1 The reflex angle is the angle whose measure is more than ⋯⋯⋯⋯° and less than ⋯⋯⋯⋯°

2 Two triangles are congruent if two angles and ⋯⋯⋯⋯

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3 If $\angle A \equiv \angle B$ and m $(\angle A) = 50°$, then m $(\angle B) = $ ....°

4 If a straight line intersects two parallel straight lines , then every two interior angles on one side of the transversal are ....

5 In $\triangle ABC$, if m $(\angle A) = 40°$ and m $(\angle B) = 80°$, then m $(\angle C) = $ ....°

3 **[a]** Using the geometric instruments , draw $\angle ABC$ of measure 120° , then draw $\overrightarrow{BF}$ to bisect the angle.　　　　　　　　　　　　　(Don't remove the arcs)
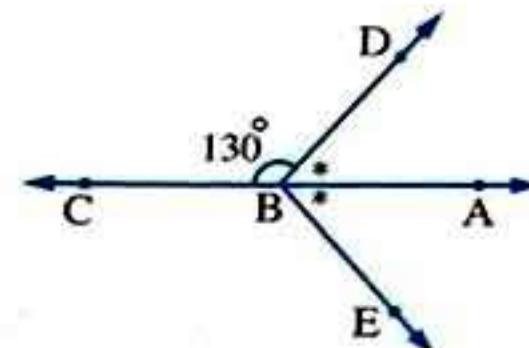
[b] In the opposite figure :

If $B \in \overrightarrow{AC}$

, m $(\angle DBC) = 130°$

and $\overrightarrow{BA}$ bisects $\angle DBE$

, find : m $(\angle ABD)$ and m $(\angle DBE)$ (Give reason)
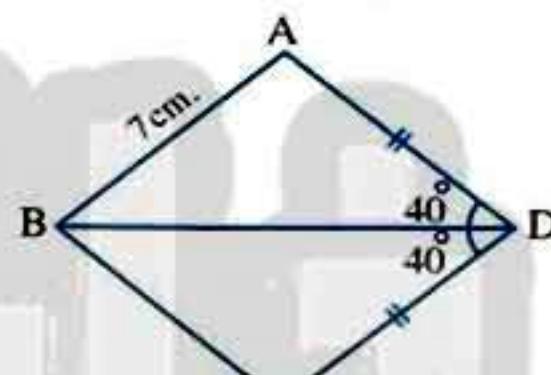
4 **[a]** In the opposite figure :

AD = DC , AB = 7 cm.

and m $(\angle ADB) = $ m $(\angle BDC) = 40°$

1 Prove that : $\triangle ABD \equiv \triangle CBD$

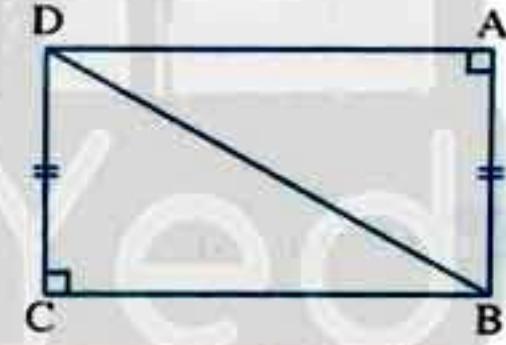**2** Find : The length of $\overline{BC}$ (Give reason)

[b] In the opposite figure :

m $(\angle BAD) = $ m $(\angle BCD) = 90°$

and AB = DC

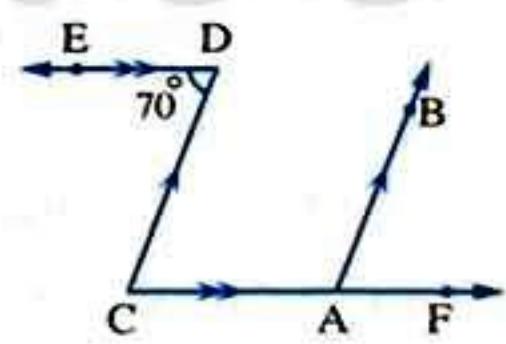Is $\triangle ABD \equiv \triangle CDB$? Why ?

5 **[a]** In the opposite figure :

$\overrightarrow{AB} \parallel \overrightarrow{CD}$, $\overrightarrow{DE} \parallel \overrightarrow{CA}$

and m $(\angle EDC) = 70°$
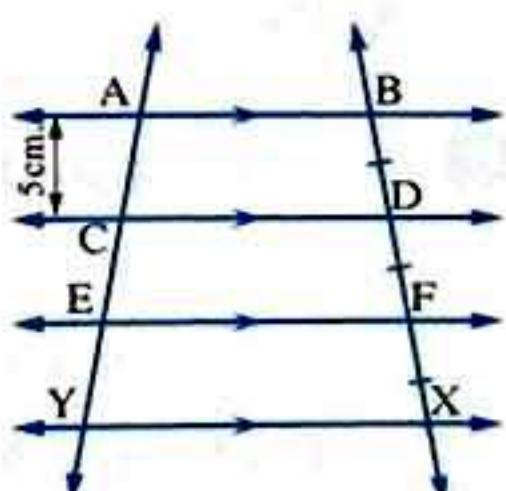
Find : m $(\angle DCA)$ and m $(\angle BAF)$ (Give reason)

[b] In the opposite figure :

$\overleftrightarrow{AB} \parallel \overleftrightarrow{CD} \parallel \overleftrightarrow{EF} \parallel \overleftrightarrow{XY}$, AC = 5 cm.

and BD = DF = FX

Find : The length of $\overline{AY}$ (Give reason)

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Geometry

(15) South Sinai Governorate   Tur Sinai Educational Zone

Answer the following questions :

1 **Choose the correct answer :**

1 The angle whose measure is 30° complements the angle whose measure is ....°

    (a) 90   (b) 180   (c) 60   (d) 150

2 The sum of measures of the two supplementary angles equals ....°

    (a) 90   (b) 100   (c) 360   (d) 180

3 If $\triangle ABC \equiv \triangle XYZ$, $m(\angle A) = 60°$, $m(\angle B) = 40°$, then $m(\angle Z) = $ ....°

    (a) 100   (b) 70   (c) 80   (d) 90

4 If $m(\angle X) = 100°$, then $m(\text{reflex } \angle X) = $ ....°

    (a) 360   (b) 180   (c) 260   (d) 80

5 If two straight lines intersect , then each two .... angles are equal in measure.

    (a) corresponding   (b) alternate   (c) adjacent   (d) vertically opposite
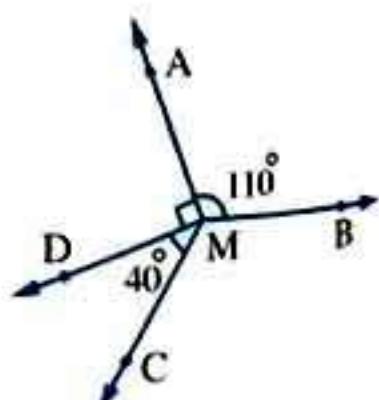
6 The sum of measures of two adjacent angles formed by the intersection of a straight line and a ray with a starting point on this straight line equals ....°

    (a) 90   (b) 180   (c) 270   (d) 360

2 **Complete :**

1 The two perpendicular lines on a third are ....

2 A circle of radius length 7 cm. , then its area = ... cm^2 $\left(\text{where } \pi = \frac{22}{7}\right)$

3 The two right-angled triangles are congruent if .... , ... are congruent to their corresponding parts in the other triangle.

4 If the two lines L_1 , L_2 are two parallel lines , then $L_1 \cap L_2 = $ ....

5 The measure of each angle of the two equal complementary angles equals ....°

3 **[a] In the opposite figure :**

$m(\angle AMB) = 110°$, $m(\angle AMD) = 90°$
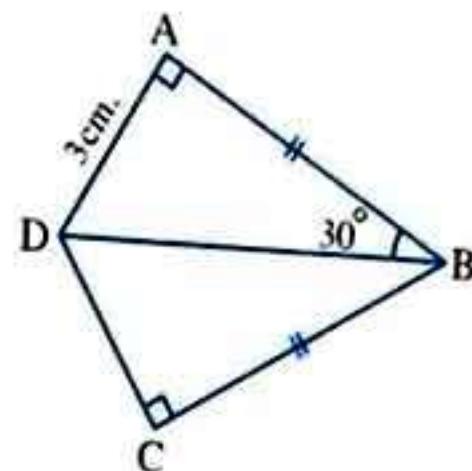
, $m(\angle DMC) = 40°$

Find : $m(\angle BMC)$

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[b] In the opposite figure :

$m (\angle A) = m (\angle C) = 90°$

, AD = 3 cm. , $m (\angle ABD) = 30°$, AB = BC

Write the conditions of congruency

of the two triangles ABD , CBD

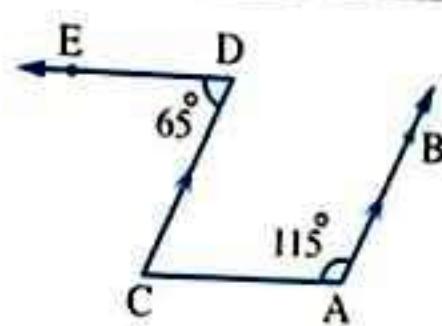, then find : The length of $\overline{CD}$ and $m (\angle DBC)$

Final Examinations

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[a] In the opposite figure :

$\overrightarrow{AB} \parallel \overrightarrow{CD}$, $m (\angle A) = 115°$
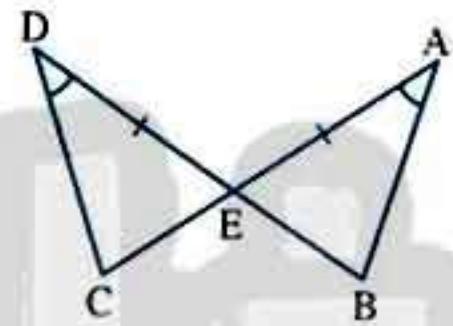
, $m (\angle D) = 65°$

Find : $m (\angle C)$

Is $\overrightarrow{AC} \parallel \overrightarrow{DE}$? Give reason.

[b] In the opposite figure :

$\overline{AC} \cap \overline{BD} = \{E\}$

, AE = ED , $m (\angle A) = m (\angle D)$

Write the conditions of congruency of the two triangles.

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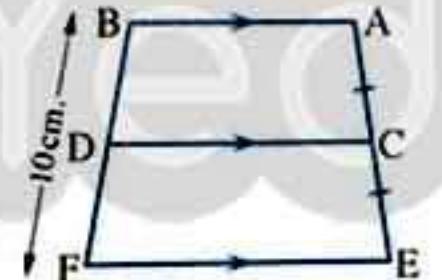
5 [a] By using your geometric instruments , draw $\angle ABC$ whose measure is 80°

, then draw $\overrightarrow{BD}$ to bisect the angle.

[b] In the opposite figure :

$\overrightarrow{AB} \parallel \overrightarrow{CD} \parallel \overrightarrow{EF}$

, AC = CE , BF = 10 cm.

Find by reason : The length of $\overline{BD}$
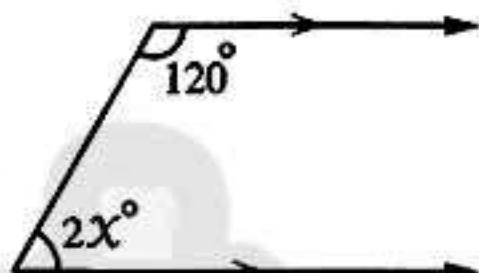
Final Examinations 2020

on Geometry

1 | Cairo Governorate | Nasr City Educational Zone St.Fatima Language School

Answer the following questions :

1 Choose the correct answer :

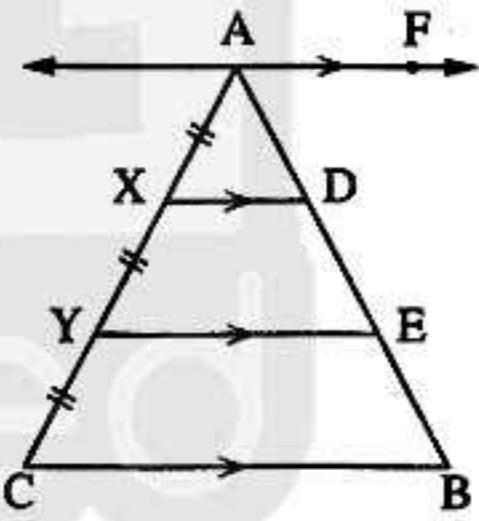**[1]** If ∠ X ≡ ∠ Y and ∠ X , ∠ Y are supplementary angles , then m (∠ X) = ⋯⋯⋯⋯

(a) 45°   (b) 90°   (c) 135°   (d) 180°

[2] If two straight lines are perpendicular to a third , then the two straight lines are ⋯⋯⋯⋯

(a) perpendicular.   (b) parallel.   (c) intersecting.   (d) congruent.

[3] If △ ABC ≡ △ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ⋯⋯⋯⋯

(a) 90°   (b) 100°   (c) 50°   (d) 80°

[4] From the opposite figure :

x = ⋯⋯⋯⋯

(a) 60°   (b) 140°

(c) 30°   (d) 180°

[5] In the opposite figure :

$\overleftrightarrow{AF}$ // $\overline{XD}$ // $\overline{YE}$ // $\overline{CB}$

, AX = XY = YC , then AD : AB = ⋯⋯⋯⋯

(a) 1 : 1   (b) 1 : 2   (c) 1 : 3

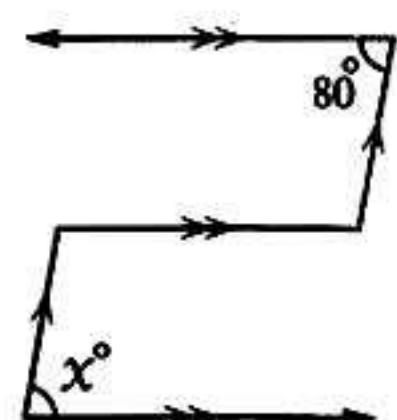**[6]** If △ ABC ≡ △ LMN , then m (∠ ACB) = m (∠ ⋯⋯⋯⋯)

(a) LMN   (b) MLN   (c) LNM   (d) NLM

2 Complete :

[1] If the ratio between the measures of two adjacent supplementary angles is 1 : 2 , then the measure of the largest angle is ⋯⋯⋯⋯°

[2] If m (∠ A) = 120° , then m (reflex ∠ A) = ⋯⋯⋯⋯°
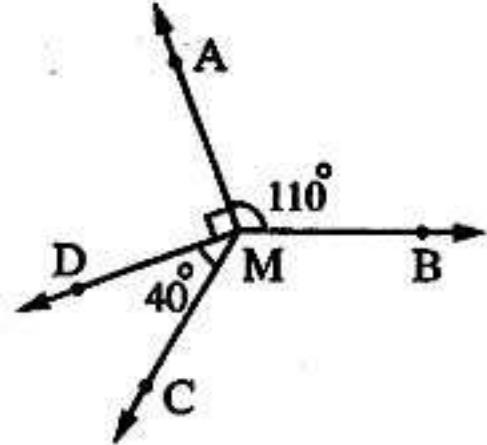
[3] Two triangles are congruent if each side of ⋯⋯⋯⋯

[4] From the opposite figure :

x = ⋯⋯⋯⋯°

5 From the opposite figure :

m (∠ BMC) = ...°
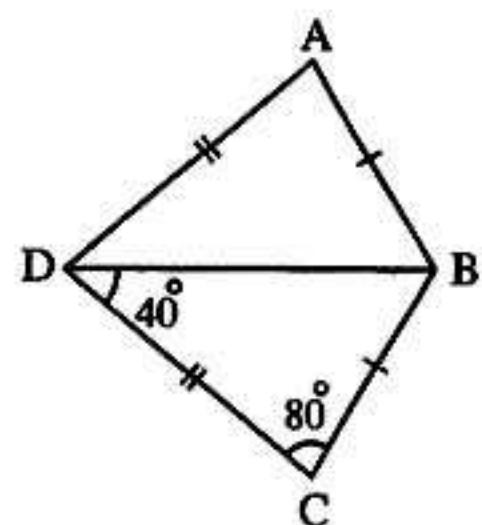
3 **[a]** In the opposite figure :

AB = BC , AD = CD

, m (∠ C) = 80°

, m (∠ BDC) = 40°

Prove that : △ CBD ≡ △ ABD and find : m (∠ ABD)
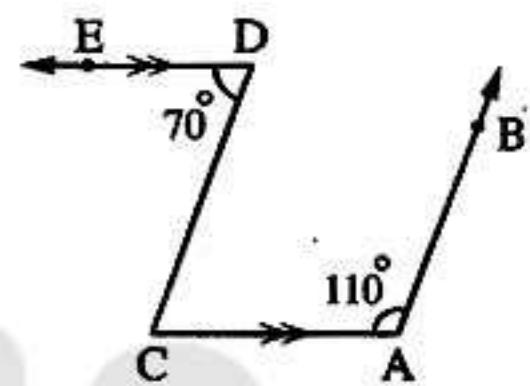
[b] In the opposite figure :

$\overrightarrow{DE}$ // $\overrightarrow{AC}$, m (∠ A) = 110°

, m (∠ D) = 70°

Prove that : $\overrightarrow{AB}$ // $\overrightarrow{CD}$

4 **[a]** In each of the following figures , find the value of x and give reason to your answer :
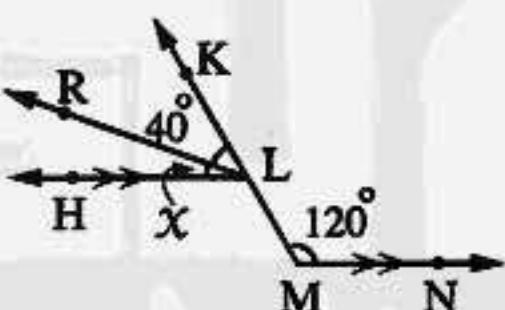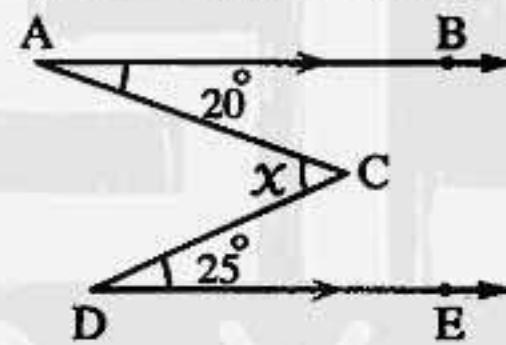

Fig. (1)   Fig. (2)

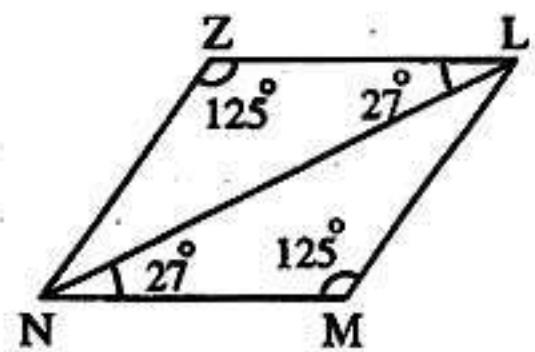**[b]** Draw any acute-angled triangle , construct the perpendicular bisector of each side.

Do the perpendicular bisectors intersect at one point ?

5 **[a]** From the opposite figure :

Prove that :

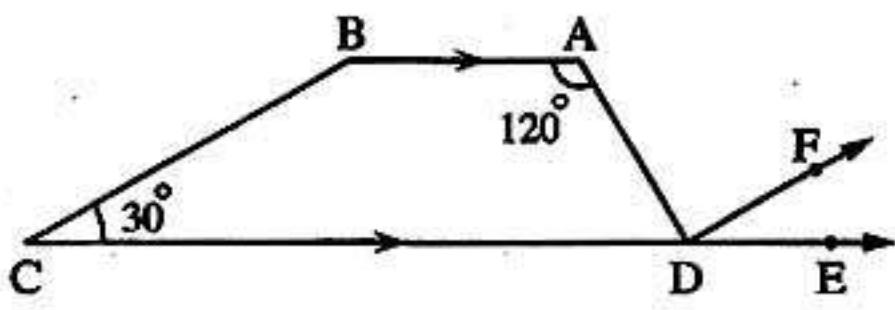The two triangles LMN and NZL are congruent

, then find : m (∠ LNZ)

[b] In the opposite figure :

$\overrightarrow{AB}$ // $\overrightarrow{CE}$, m (∠ BAD) = 120°

, m (∠ BCD) = 30°

, m (∠ BAD) is four times m (∠ FDE)

Prove that : $\overrightarrow{DF}$ // $\overrightarrow{BC}$ and $\overrightarrow{DF}$ ⊥ $\overrightarrow{AD}$

2   Cairo Governorate   El-Zaitoun Educational Zone
El-Ma'aref Modern Language School

Answer the following questions :

1 **Choose the correct answer :**

[1] If two straight lines are perpendicular to a third
, then the two straight lines are ···············

(a) perpendicular.   (b) parallel.   (c) congruent.   (d) intersecting.

[2] If $\triangle ABC \equiv \triangle XYZ$, $m(\angle A) + m(\angle B) = 100°$, then $m(\angle Z) = $ ···············

(a) 50°   (b) 90°   (c) 80°   (d) 100°

[3] The image of the point $(-3, 5)$ by translation of 3 units in the negative direction of
the y-axis is ···············

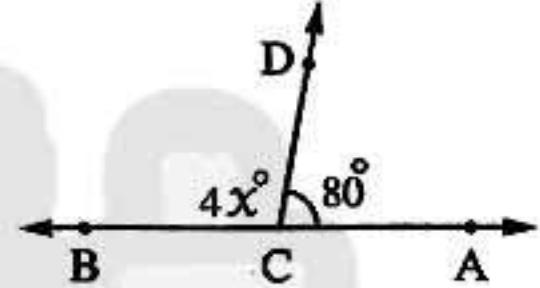(a) $(-3, 2)$ (b) $(-3, 8)$ (c) $(-6, 5)$ (d) $(0, 8)$

[4] In the opposite figure :

$\overrightarrow{BA} \cap \overrightarrow{CD} = \{C\}$

, $m(\angle DCA) = 80°$

, then $X = $ ···············

(a) 20°   (b) 25°   (c) 30°   (d) 100°

[5] If $\triangle ABC \equiv \triangle XYZ$, $m(\angle A) = 50°$, $m(\angle Y) = 60°$
, then $m(\angle C) = $ ···············
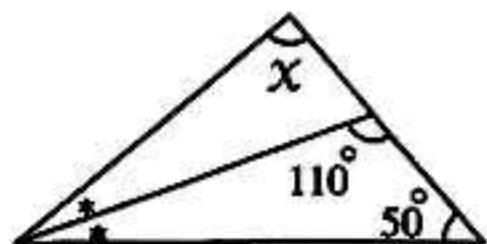
(a) 50°   (b) 60°   (c) 70°   (d) 80°

[6] The measure of the supplement of the angle whose measure is 30° equals ···············
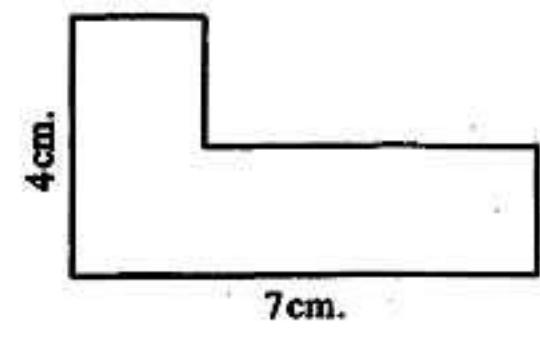
(a) 60°   (b) 180°   (c) 90°   (d) 150°

2 **Complete the following :**

[1] If a straight line intersects two parallel straight lines
, then each two corresponding angles are ···············

[2] In the opposite figure :

$X = $ ···············

[3] If $\angle X$ complements $\angle Y$ and $\angle X \equiv \angle Y$
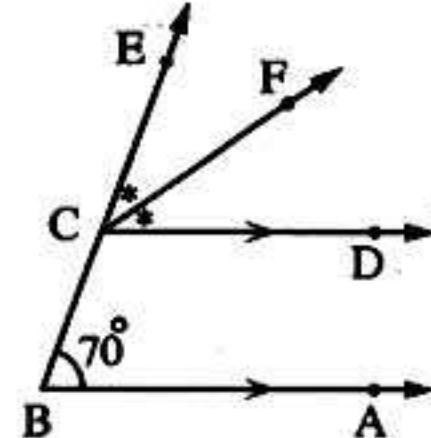, then $m(\angle X) = $ ···············°

[4] The perimeter of the opposite figure is ··············· cm.

[5] The two right-angled triangles are congruent if ···············
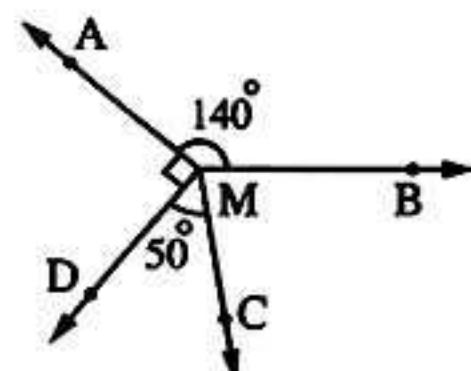
3 [a] From the opposite figure , find :

m (∠ ECF)

Give the reason.

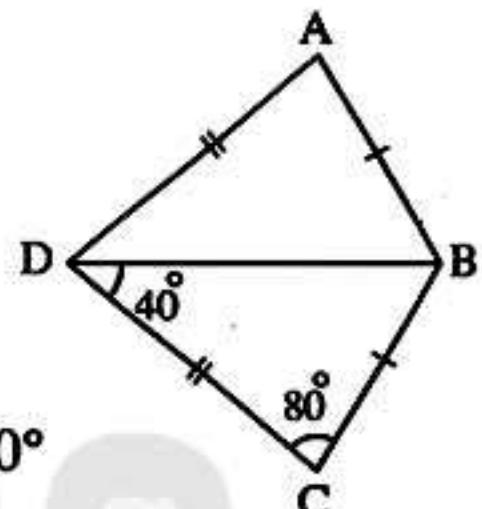[b] From the opposite figure , find :

m (∠ BMC)

With steps.

4 [a] In the opposite figure :

AB = BC , AD = CD , m (∠ C) = 80° , m (∠ BDC) = 40°

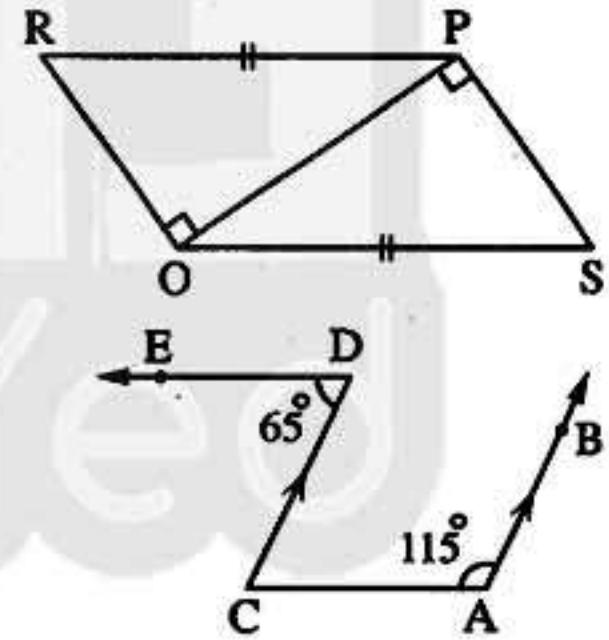[1] Prove that : Δ CBD ≡ Δ ABD

[2] Find : m (∠ ABD)

[b] By using your geometric instruments , draw ∠ ABC of measure 110°
, then draw $\overrightarrow{BF}$ to bisect the angle.

5 [a] From the opposite figure :

Prove that : [1] Δ ROP ≡ Δ SPO

[2] m (∠ RPS) = m (∠ SOR)

[b] In the opposite figure :

If $\overrightarrow{AB}$ // $\overrightarrow{CD}$, m (∠ D) = 65° , m (∠ A) = 115°

, then prove that :

$\overrightarrow{AC}$ // $\overrightarrow{DE}$

3 Cairo Governorate | Zone Educative Abdine Lycee Beb El-Louk

Answer the following questions :

1 Choose the correct answer :

[1] If ∠ X complements ∠ Y and ∠ X ≡ ∠ Y , then m (∠ X) = ··············

(a) 45°   (b) 90°   (c) 180°   (d) 360°

[2] If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ··············

(a) 50°   (b) 80°   (c) 90°   (d) 100°

3 If two straight lines are perpendicular to a third
, then the two straight lines are ···············

(a) perpendicular.   (b) parallel.   (c) congruent.   (d) intersecting.

4 The sum of the measures of the accumulative angles at a point is ···············

(a) 630°   (b) 180°   (c) 90°   (d) 360°

5 The measure of the supplement of the angle whose measure is 30° equals ···············

(a) 60°   (b) 180°   (c) 150°   (d) 90°

6 The angle whose measure is more than 90° and less than 180° is ··············· angle.

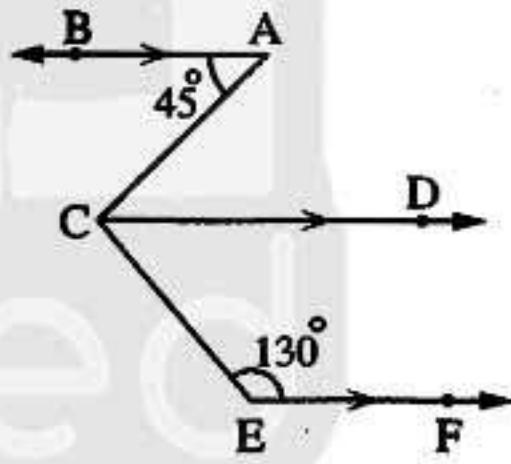(a) an obtuse   (b) an acute   (c) a right   (d) a straight

2 **Complete the following :**

1 The two triangles are congruent if two sides and ··············· are congruent with the corresponding parts of the other.

2 If $\triangle ABC \equiv \triangle XYZ$, then m $(\angle Z)$ = m $(\angle$ ···············$)$

3 The sum of the measures of the accumulative angles at a point equals ···············°

4 If m $(\angle A) = 110°$, then m (reflex $\angle A$) = ···············°

5 The two adjacent angles formed by intersecting of a straight line and a ray are ···············
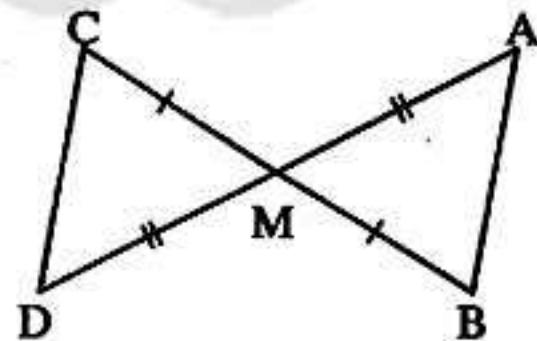
3 **[a] In the opposite figure :**

$\overrightarrow{AB}$ // $\overrightarrow{CD}$ // $\overrightarrow{EF}$, m $(\angle A) = 45°$
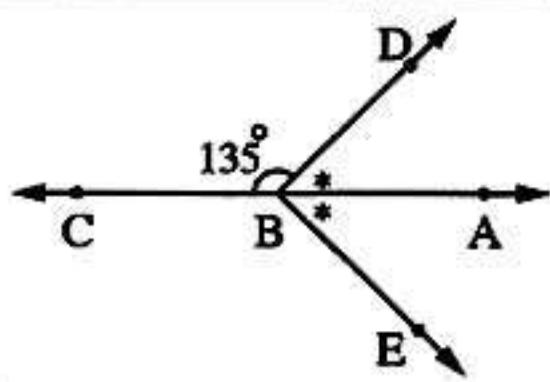
, m $(\angle E) = 130°$

Find : m $(\angle ACE)$

[b] In the opposite figure :

$\overline{AD} \cap \overline{BC} = \{M\}$, BM = MC , AM = MD

, write the conditions

for $\triangle AMB$, $\triangle DMC$ to be congruent.

4 **[a] In the opposite figure :**

If B ∈ $\overleftrightarrow{AC}$, m $(\angle DBC) = 135°$

and $\overrightarrow{BA}$ bisects $\angle DBE$

Find : **1** m $(\angle ABD)$ **2** m $(\angle DBE)$ **3** m $(\angle CBE)$

[b] By using your geometric instruments , draw $\angle ABC$ whose measure is 130°
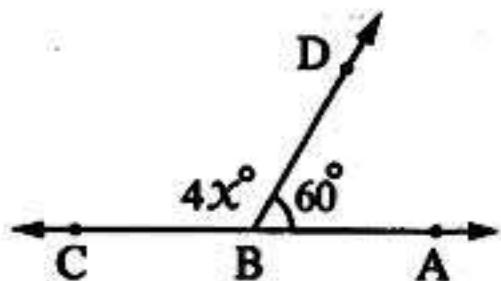, then draw $\overrightarrow{BF}$ to bisect the angle.

5 **[a]** In the opposite figure :

$\overleftrightarrow{AC} \cap \overrightarrow{BD} = \{B\}$

, m (∠ ABD) = 60°

, m (∠ DBC) = 4 x°

Find in degrees : The value of x
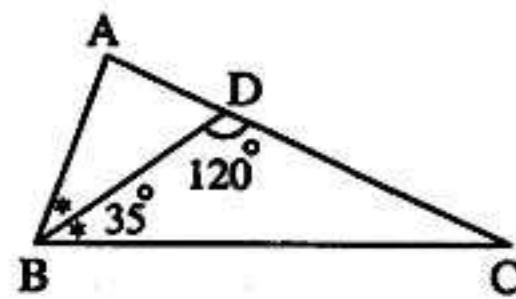
[b] In the opposite figure :

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 120°

Find : m (∠ A) in degrees.

4 **Giza Governorate**

El-Haram Zone
El-Maarefa Exp. Lang. School

Answer the following questions :

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www.facebook.com/ZakrolySite

1 **Choose the correct answer :**

[1] If △ ABC ≡ △ XYZ , m (∠ A) = 50° , m (∠ B) = 60° , then m (∠ Z) = ...

(a) 50°   (b) 60°   (c) 70°   (d) 120°

[2] The sum of measures of the accumulative angles at a point equals ....

(a) 180°   (b) 630°   (c) 360°   (d) 603°

[3] The angle whose measure is 78° 60 , is .... angle.

(a) a right   (b) an acute   (c) an obtuse   (d) a straight

[4] If ∠ A ≡ ∠ B and ∠ A complements ∠ B , then m (∠ A) = ...

(a) 45°   (b) 90°   (c) 100°   (d) 180°

[5] If two straight lines are parallel to a third straight line , then they are ....

(a) perpendicular.   (b) parallel.   (c) congruent.   (d) intersecting.

[6] The measure of the supplement of an angle of measure 35° equals ....

(a) 65°   (b) 165°   (c) 180°   (d) 145°

2 **Complete the following :**

[1] The perpendicular bisector of a line segment is called ....

[2] If m (∠ A) = 160° , then m (reflex ∠ A) = ...°

[3] The two adjacent angles formed by a straight line and a ray with a start point on this straight line are ....
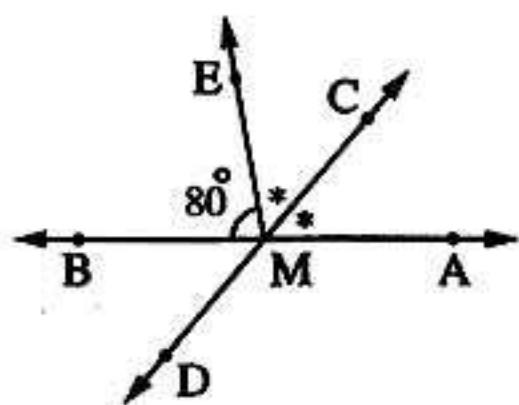
[4] If two straight lines intersect , then each two vertically opposite angles are ··············

[5] If $L_1 \perp L_2$ and $L_2 /\!/ L_3$, then L_1 ·············· L_3

3 **[a]** In the opposite figure :

$\overleftrightarrow{AB} \cap \overleftrightarrow{CD} = \{M\}$, $m (\angle BME) = 80°$

, $\overrightarrow{MC}$ bisects $\angle AME$
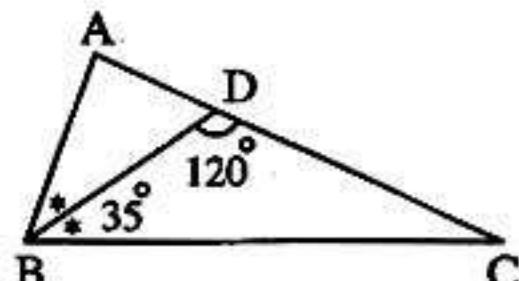
Find : [1] $m (\angle AMC)$ [2] $m (\angle BMD)$

[b] In the opposite figure :

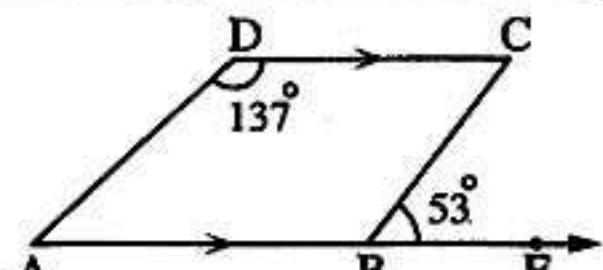$\overrightarrow{BD}$ bisects $\angle ABC$, $m (\angle DBC) = 35°$

, $m (\angle BDC) = 120°$

Find : $m (\angle A)$ in degrees.

4 **[a]** In the opposite figure :

$\overrightarrow{AB} /\!/ \overleftrightarrow{DC}$, $m (\angle EBC) = 53°$, $m (\angle D) = 137°$

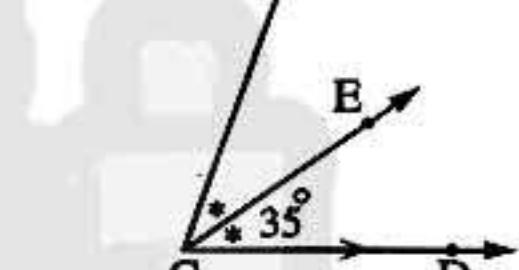Is $\overrightarrow{BC} /\!/ \overrightarrow{AD}$? "State the reason"
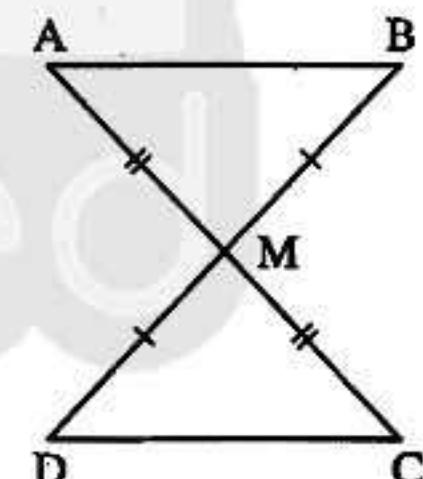
[b] In the opposite figure :

$\overrightarrow{AB} /\!/ \overrightarrow{CD}$, $\overrightarrow{CE}$ bisects $\angle ACD$

, $m (\angle DCE) = 35°$

Find : $m (\angle A)$

5 **[a]** Draw $\angle ABC$ of measure $85°$, then bisect it. (Don't remove the arcs)

[b] In the opposite figure :

$AM = CM$

, $BM = DM$

Show with the reason if $\triangle ABM \equiv \triangle CDM$ or not.

5   Giza Governorate   Boulaq El-Dakrour Dira. of Edu.
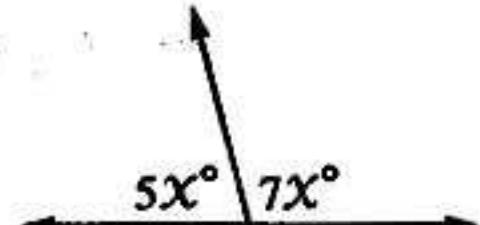Dar El-Hanan Lang. Sch. for Girls

Answer the following questions :

1 **Choose the correct answer :**

[1] The supplement of the angle whose measure is $30°$ is an angle whose measure is ··············

(a) $60°$ (b) $180°$ (c) $150°$ (d) $90°$

[2] If $\triangle ABC \equiv \triangle XYZ$ and $m (\angle A) + m (\angle B) = 110°$, then $m (\angle Z) =$ ··············

(a) $50°$ (b) $60°$ (c) $70°$ (d) $80°$

3 From the opposite figure :
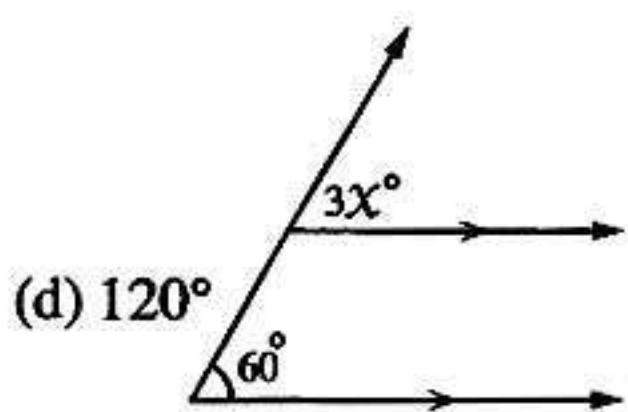
The value of x = ⋯⋯⋯⋯

(a) 30°   (b) 15°

(c) 45°   (d) 18°

4 From the opposite figure :
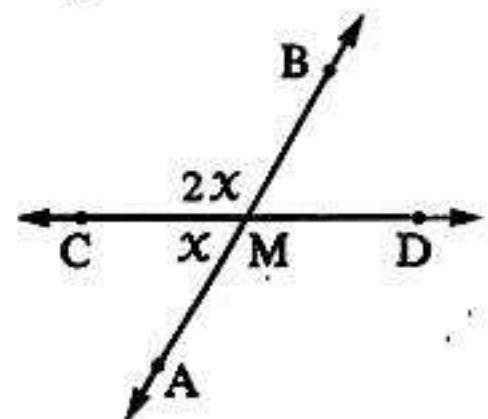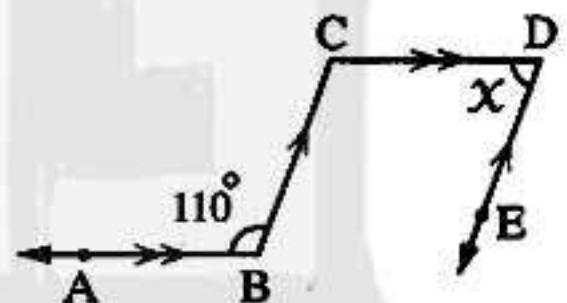
x = ⋯⋯⋯⋯

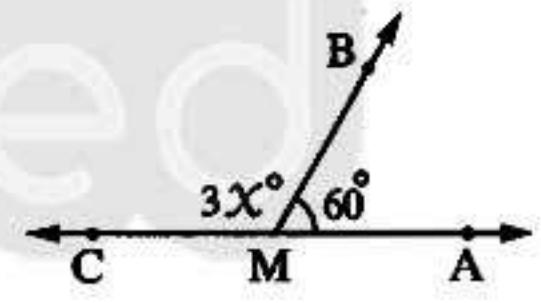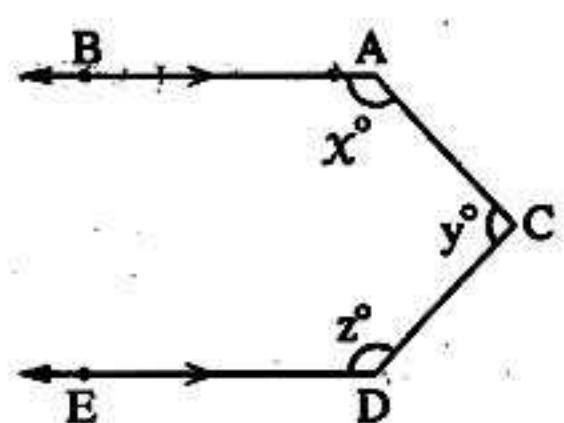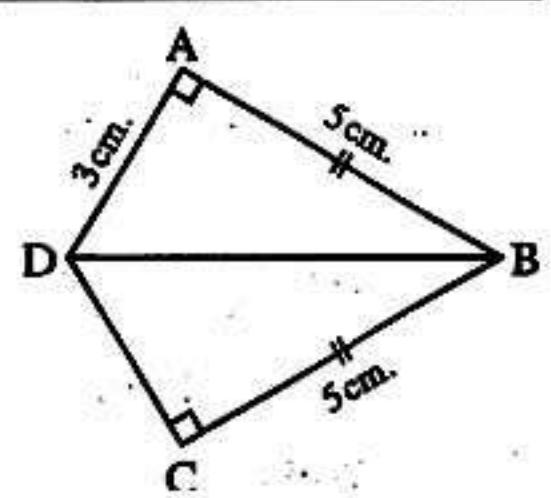(a) 20°   (b) 30°   (c) 40°   (d) 120°

5 The angle of measure 179° is ⋯⋯⋯⋯

(a) acute.   (b) obtuse.   (c) right.   (d) straight.

6 In the opposite figure :

$\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$, then x = ⋯⋯⋯⋯
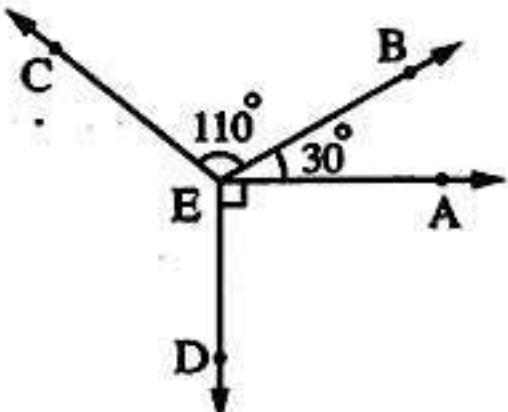
(a) 30°   (b) 60°

(c) 45°   (d) 90°

---

2 Complete the following :

1 The complement of an angle of measure 65° is an angle of measure ⋯⋯⋯⋯°

2 If m (∠ B) = 160° , then m (reflex ∠ B) = ⋯⋯⋯⋯°

3 In the opposite figure :

$\overrightarrow{CD} \parallel \overrightarrow{BA}$, $\overrightarrow{DE} \parallel \overrightarrow{CB}$

, then x = ⋯⋯⋯⋯°

4 In the opposite figure :

If $\overrightarrow{MB} \cap \overrightarrow{AC} = \{M\}$, m (∠ AMB) = 60°

, then the value of x equals ⋯⋯⋯⋯°

5 In the opposite figure :

$\overrightarrow{AB} \parallel \overrightarrow{DE}$

, then $x + y + z$ = ⋯⋯⋯⋯

---

3 [a] In the opposite figure :

m (∠ A) = m (∠ C) = 90°

, AB = BC = 5 cm. , AD = 3 cm.

1 Mention the conditions for △ ABD , △ CBD to be congruent.

2 Find : The length of $\overline{CD}$.

[b] In the opposite figure :

m (∠ AEB) = 30° , m (∠ BEC) = 110°

, m (∠ AED) = 90°

Find : m (∠ DEC)
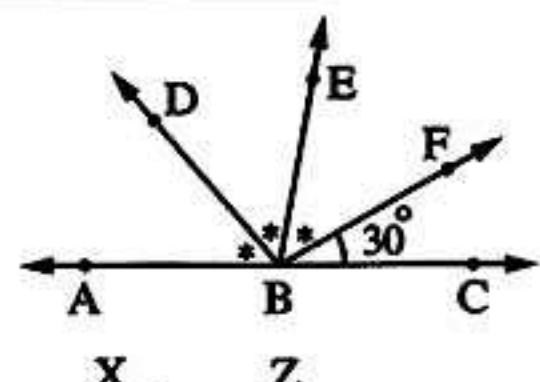
4 **[a] In the opposite figure :**

B ∈ $\overleftrightarrow{AC}$, m (∠ FBC) = 30°

, m (∠ ABD) = m (∠ DBE) = m (∠ EBF)
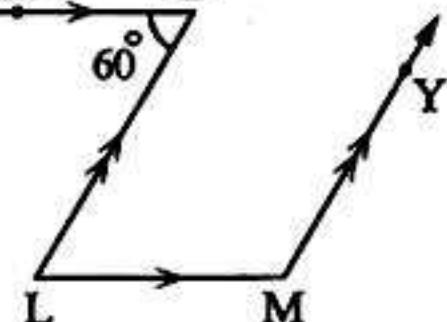
Find : m (∠ ABE)

[b] In the opposite figure :

$\overrightarrow{ZX}$ // $\overrightarrow{LM}$, $\overrightarrow{LZ}$ // $\overrightarrow{MY}$, m (∠ Z) = 60°

Find : ① m (∠ L)   ② m (∠ M)
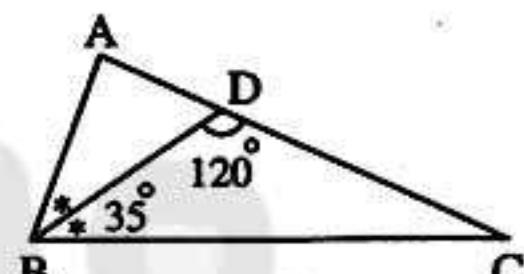
5 **[a] In the opposite figure :**

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 120°

Find : m (∠ A)
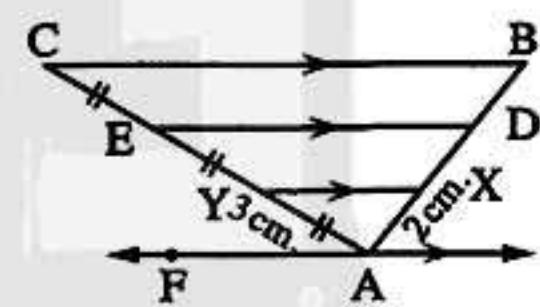
[b] In the opposite figure :

$\overleftrightarrow{AF}$ // $\overline{XY}$ // $\overline{DE}$ // $\overline{BC}$ and AY = YE = EC , AY = 3 cm.

, AX = 2 cm. and the perimeter of △ ABC = 23 cm.

Find : The length of $\overline{BC}$

[c] Draw ∠ ABC of measure 100° and bisect it.   (Don't remove the arcs)

6   Alexandria Governorate   **East Educational Zone** **Sidi Gaber Lang. Sch. for boys**

Answer the following questions :

1 **Complete the following :**

① If m (∠ A) = 120° , then the measure of the reflex angle of ∠ A = ...°

② The two adjacent angles formed by intersecting a straight line and a ray are ....

③ If ∠ A supplements ∠ B and ∠ A supplements ∠ C

, then ∠ B and ∠ C are ....

④ Two triangles are congruent if the lengths of two sides and the measure of .... are congruent with the corresponding parts of the other.

5 If $\angle A$ and $\angle B$ are complementary angles , m $(\angle A) = 2$ m $(\angle B)$, then m $(\angle B) = \ldots\ldots\ldots^\circ$
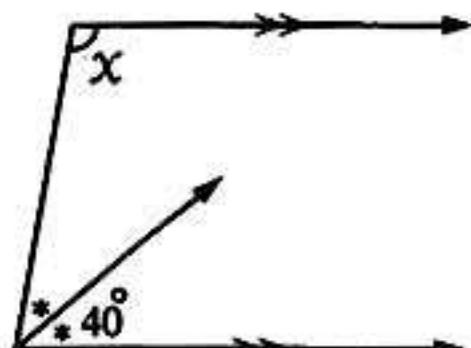
2 **Choose the correct answer :**

1 If two straight lines are perpendicular to a third , then the two straight lines are $\ldots\ldots\ldots$

  (a) perpendicular.   (b) congruent.   (c) parallel.   (d) intersecting.

2 The axis of symmetry of a line segment is $\ldots\ldots\ldots$

  (a) perpendicular from its midpoint.   (b) equal to it.

  (c) parallel to it.   (d) congruent to it.

3 In the opposite figure :

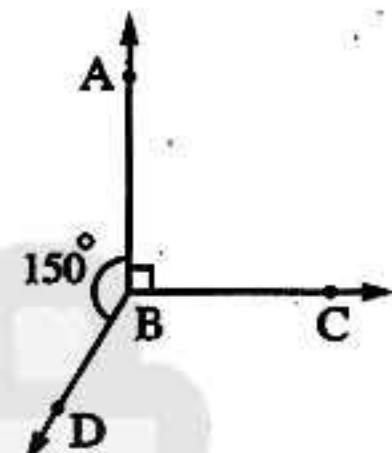$X = \ldots\ldots\ldots^\circ$

  (a) 80

  (b) 120

  (c) 100

  (d) 180

4 In the opposite figure :

m $(\angle CBD) = \ldots\ldots\ldots^\circ$
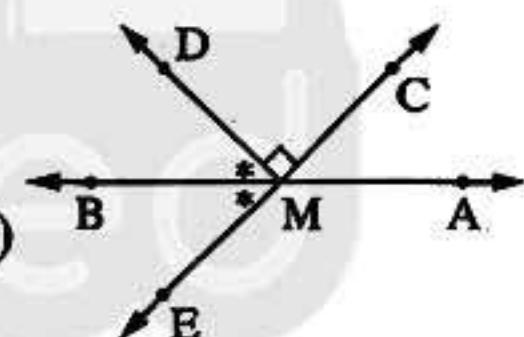
  (a) 100   (b) 120

  (c) 140   (d) 240

5 If $\triangle ABC \equiv \triangle XYZ$, m $(\angle Z) = 55^\circ$, then m $(\angle A) +$ m $(\angle B) = \ldots\ldots\ldots^\circ$

  (a) 110   (b) 115   (c) 120   (d) 125

3 **[a]** In the opposite figure :

$\overleftrightarrow{AB} \cap \overleftrightarrow{CE} = \{M\}$, $\overrightarrow{MD} \perp \overrightarrow{MC}$, $\overrightarrow{MB}$ bisects $\angle DME$

Find showing the reason :   **1** m $(\angle BME)$ **2** m $(\angle AMC)$

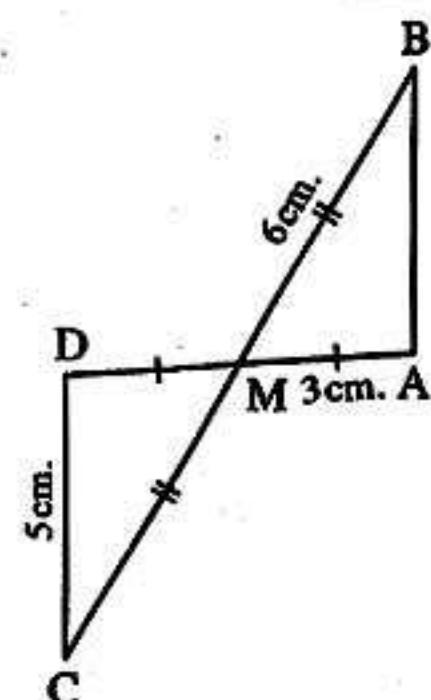   **3** m $(\angle AME)$

[b] Draw the line segment AB of length 8 cm. , then construct the axis of symmetry of $\overline{AB}$

      (Don't remove the arcs)

4 **[a]** In the opposite figure :

Complete :

1 $\triangle ABM \equiv \triangle \ldots\ldots\ldots$

2 m $(\angle B) = $ m $(\angle \ldots\ldots\ldots)$

3 m $(\angle A) = $ m $(\angle \ldots\ldots\ldots)$

4 The perimeter of $\triangle DMC = \ldots\ldots\ldots$ cm.
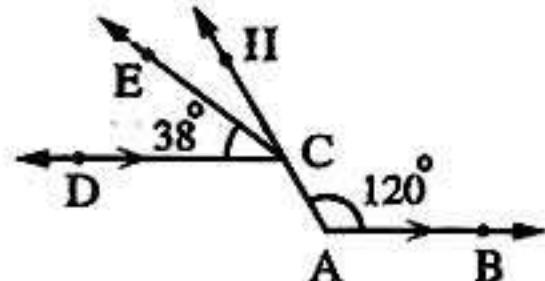
[b] In the opposite figure :

$\overrightarrow{AB}$ // $\overrightarrow{DC}$, m ($\angle$ A) = 120° , H $\in$ $\overrightarrow{AC}$

, m ($\angle$ ECD) = 38°

Find : m ($\angle$ ACD) , m ($\angle$ HCE) (showing the reason)

5 In the opposite figure :

$\overleftrightarrow{OR}$ is the axis of symmetry of the shape NERAM , O $\in$ $\overleftrightarrow{MN}$
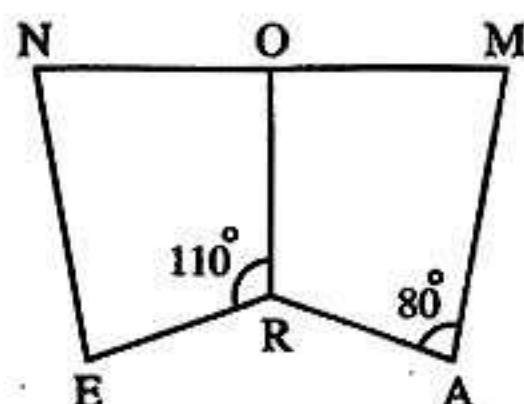
Complete : 1 Quad AMOR ≡ Quad ....

     2 m ($\angle$ NOR) = m ($\angle$ ....)

     3 m ($\angle$ AMO) = m ($\angle$ ....)

     4 m ($\angle$ ORA) = m ($\angle$ ....) = ...°

     5 m ($\angle$ NER) = m ($\angle$ ....) = ...°

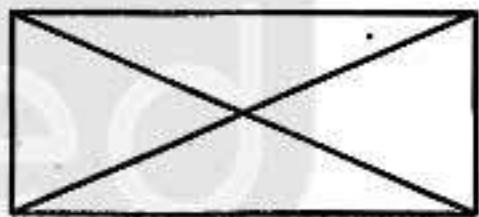**7**   Alexandria Governorate   **Borg El-Arab Educational Zone**
Al-Safwa Integrated Schools

Answer the following questions :   *(Calculator is allowed)*

1 **Complete each of the following :**

    1 The complement of the angle of measure 55° is an angle of measure ....°

    2 The sum of measures of the accumulative angles at a point equals ....°

    3 If m ($\angle$ B) = 160° , then m (reflex $\angle$ B) = ...°

    4 The perpendicular bisector of a line segment is called ....

    5 The number of triangles in the opposite figure is ....

2 **Choose the correct answer :**

    1 If L_1 // L_2 and L_2 $\perp$ L_3 , then ....

     (a) L_1 $\perp$ L_2 (b) L_3 // L_2 (c) L_1 $\perp$ L_3 (d) L_3 // L_1

    2 If $\triangle$ ABC ≡ $\triangle$ XYZ and m ($\angle$ A) + m ($\angle$ B) = 110° , then m ($\angle$ Z) = ...°

     (a) 50   (b) 60   (c) 70   (d) 80

    3 If the ratio between the measures of two supplementary angles is 5 : 13

     , then the measure of the smaller angle is ....°

     (a) 50   (b) 130   (c) 150   (d) 180°

    4 The type of the angle of measure 89° 60´ is ....

     (a) acute.   (b) obtuse.   (c) right.   (d) reflex.

5 The two diagonals are perpendicular and equal in length in the ··············

(a) rectangle.   (b) rhombus.   (c) square.   (d) parallelogram.

6 If $\triangle ABC \equiv \triangle LMN$, then $\overline{AC}$ ·············· $\overline{LN}$

(a) =   (b) ≡   (c) <   (d) >

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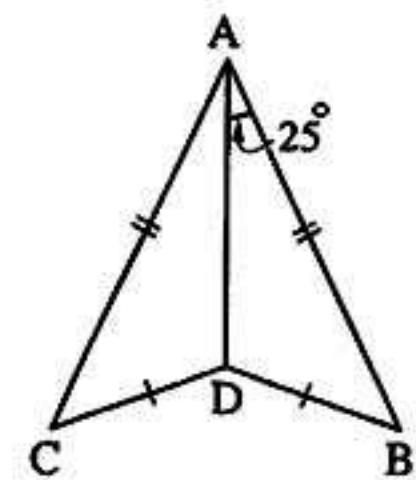
3 **[a]** In the opposite figure :

$AB = AC$, $BD = CD$

, $m(\angle BAD) = 25°$

Is $\triangle ADC \equiv \triangle ADB$? Why ?

Find : $m(\angle CAB)$
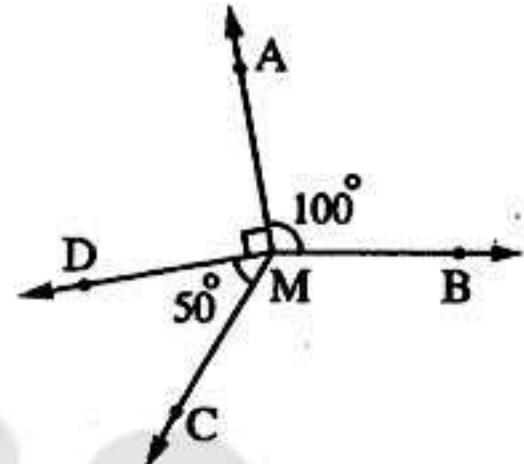
[b] In the opposite figure :

$m(\angle BMA) = 100°$

, $m(\angle AMD) = 90°$

, $m(\angle DMC) = 50°$

Find with steps : $m(\angle BMC)$

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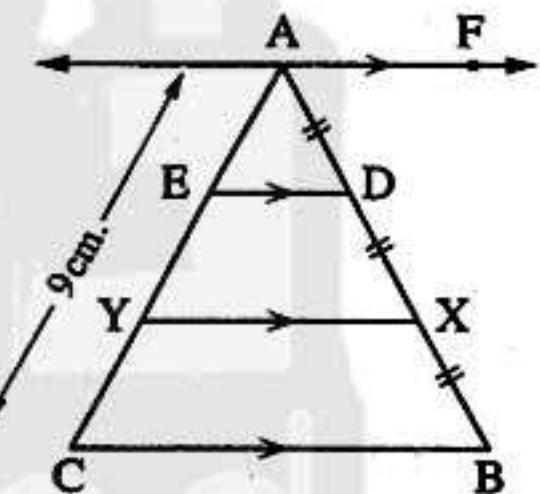
4 **[a]** In the opposite figure :

$\overleftrightarrow{AF} \parallel \overline{ED} \parallel \overline{YX} \parallel \overline{CB}$

, $AD = DX = XB$, $AC = 9$ cm.

Find : The length of $\overline{AY}$ (Give reason)

[b] Draw $\angle ABC$ of measure $100°$ and bisect it.

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5 **[a]** In the opposite figure :
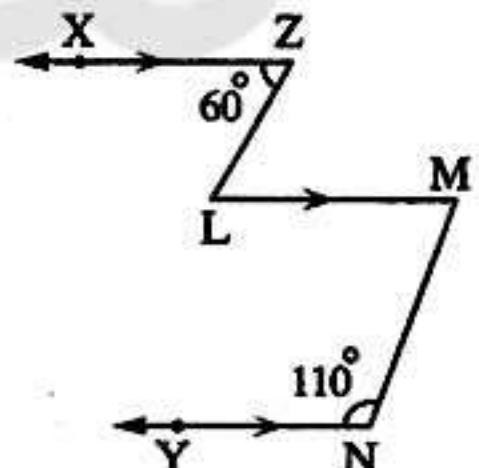
$\overrightarrow{ZX} \parallel \overline{LM}$

, $\overline{LM} \parallel \overrightarrow{NY}$

, $m(\angle N) = 110°$

, $m(\angle Z) = 60°$

Find : **1** $m(\angle L)$ **2** $m(\angle M)$
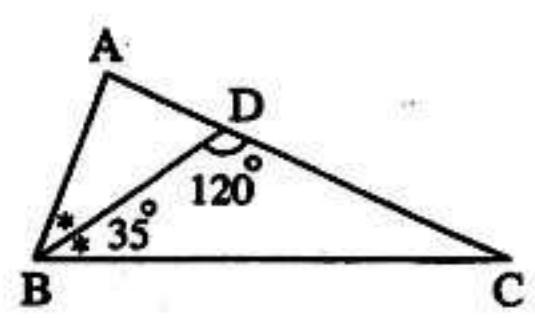
[b] In the opposite figure :

$\overrightarrow{BD}$ bisects $\angle ABC$

, $m(\angle DBC) = 35°$

, $m(\angle BDC) = 120°$

Find : $m(\angle A)$

8 El-Kalyoubia Governorate / Directorate of Education Mathematics Supervision

Answer the following questions :

1 **Choose the correct answer :**

1 If △ ABC ≡ △ XYZ , then AC = ...

(a) XY   (b) XZ   (c) YZ   (d) AB

2 If m (∠ B) = 105° , then m (reflex ∠ B) = ...

(a) 255°   (b) 75°   (c) 105°   (d) 50°

3 If $\overline{AB}$ ≡ $\overline{CD}$ and AB = 4 cm. , then AB + 2 CD = ... cm.

(a) 10   (b) 4   (c) 8   (d) 12

4 The measure of the supplementary of the angle whose measure is 30° equals ....°

(a) 60   (b) 80   (c) 150   (d) 90

5 A cube is of volume 125 cm^3 , then the area of its base = ... cm^2

(a) 5   (b) 15   (c) 25   (d) 10

6 The measure of the right angle is ....°

(a) 60   (b) 90   (c) 180   (d) 70
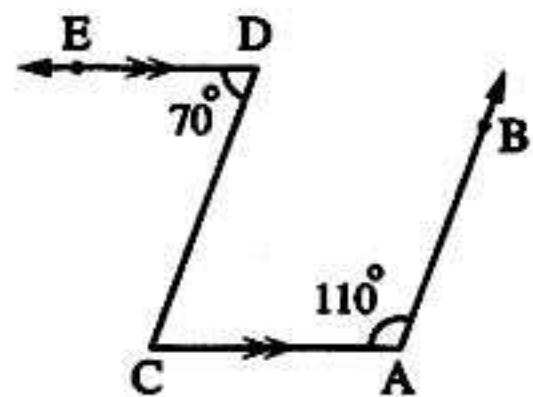
2 **Complete the following :**

1 The two diagonals are equal in length in .... and ....

2 The perpendicular bisector of a line segment is called ....

3 The sum of the measures of the accumulative angles at a point equals ....°

4 If △ ABC ≡ △ XYZ , m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ...°

5 If two straight lines are perpendicular to a third , then the two straight lines are ....

3 **[a] In the opposite figure :**

$\overrightarrow{DE}$ // $\overline{AC}$, m (∠ A) = 110° , m (∠ D) = 70°

Complete the following :

1 m (∠ C) = ... because ....

2 Is $\overrightarrow{AB}$ // $\overline{CD}$? (...............) because ....

[b] Using the geometric instruments , draw ∠ ABC where m (∠ B) = 120°
, then draw $\overrightarrow{BD}$ to bisect the angle.   (Don't remove the arcs)
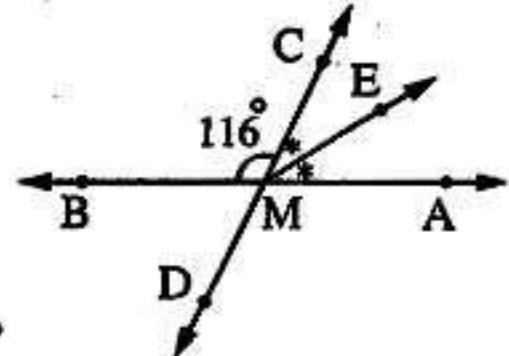
4 [a] In the opposite figure :

$\overrightarrow{AB} \cap \overrightarrow{CD} = \{M\}$, $\overrightarrow{ME}$ bisects $\angle AMC$, $m(\angle BMC) = 116°$

Complete the following :

[1] $m(\angle AMC) = \ldots\ldots\ldots°$ [2] $m(\angle AMD) = \ldots\ldots\ldots°$
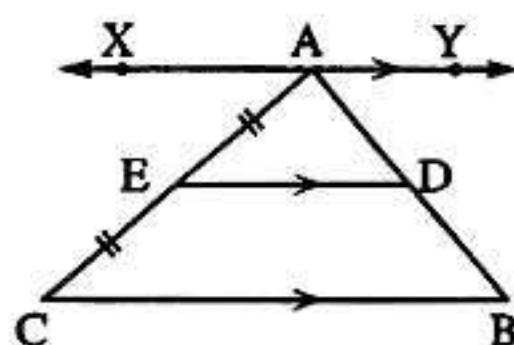
[3] $m(\angle AME) = \ldots\ldots\ldots°$

[b] In the opposite figure :

$\overleftrightarrow{XY} \parallel \overline{ED} \parallel \overline{BC}$, $AE = EC$

Complete the following :

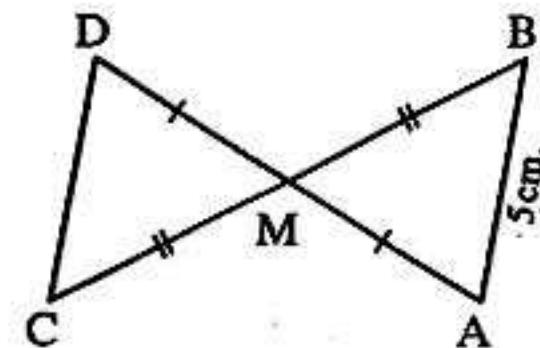[1] $AD = \ldots\ldots\ldots$ [2] $AD : AB = \ldots\ldots\ldots : \ldots\ldots\ldots$

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5 [a] From the opposite figure complete the following :

[1] $\triangle ABM \equiv \triangle \ldots\ldots\ldots$

[2] $CD = \ldots\ldots\ldots$ cm.

[3] $m(\angle B) = m(\angle \ldots\ldots\ldots)$

[b] Mention two cases of congruency of two triangles.

9   **El-Sharkia Governorate**   West Zagazig Zone
Zagazig English Lang. Sch. for Girls

Answer the following questions :

1 **Choose the correct answer :**

[1] If $\angle X$ complements $\angle Y$ and $\angle X \equiv \angle Y$, then $m(\angle X) = \ldots\ldots\ldots°$

(a) 45   (b) 90   (c) 20   (d) 180

[2] A square is of perimeter 20 cm. , then its area = $\ldots\ldots\ldots$ cm^2

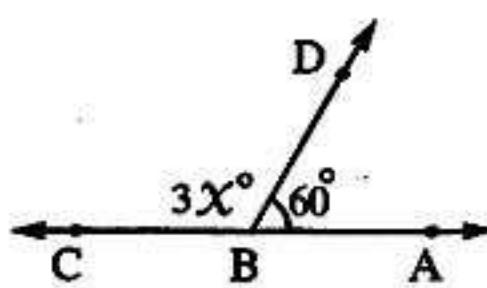(a) 4   (b) 5   (c) 25   (d) 400

[3] The two diagonals are equal in length in the $\ldots\ldots\ldots$

(a) rhombus.   (b) parallelogram.   (c) trapezium.   (d) rectangle.

[4] In the opposite figure :

$B \in \overleftrightarrow{AC}$, then $X = \ldots\ldots\ldots$

(a) 30   (b) 120

(c) 40   (d) 150

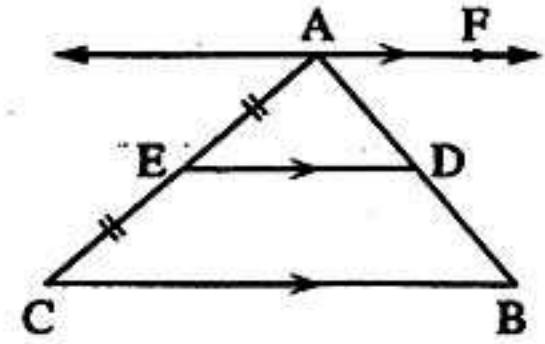[5] If $m(\angle A) = 110°$, then $m(\text{reflex } \angle A) = \ldots\ldots\ldots$

(a) 70°   (b) 360°   (c) 250°   (d) 150°

6 In the opposite figure :

If $\overrightarrow{AF}$ // $\overrightarrow{ED}$ // $\overrightarrow{CB}$, AE = EC , then AD : AB = ...

(a) 2 : 1   (b) 3 : 2

(c) 1 : 3   (d) 1 : 2

---

2 Complete each of the following :

1 If △ ABC ≡ △ XYZ , m (∠ A) + m (∠ B) = 120° , then m (∠ Z) = ...°

2 If a straight line intersects two parallel lines , then each two corresponding angles are ....

3 If △ ABC ≡ △ XYZ , then AC = ...

4 Two right-angled triangles are congruent if ....
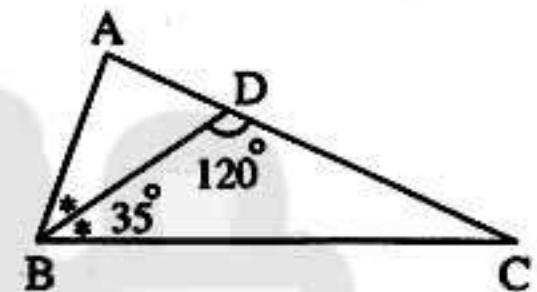
5 If two straight lines intersect , then the measures of each two vertically opposite angles are ....

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3 **[a]** In the opposite figure :

$\overrightarrow{BD}$ bisects ∠ ABC , m (∠ DBC) = 35°

, m (∠ BDC) = 120°

Find : m (∠ C) , m (∠ ABC) and m (∠ A)
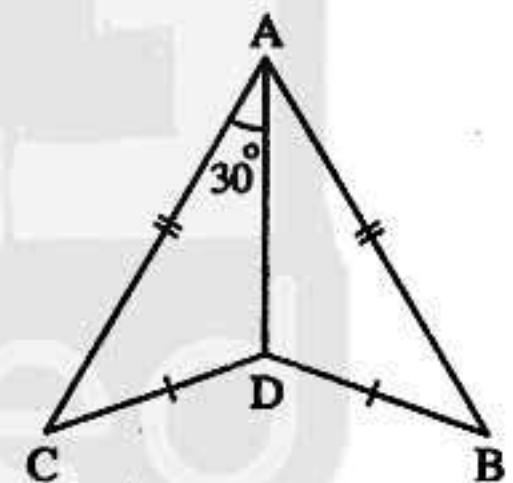
[b] In the opposite figure :

AC = AB , DC = DB

, m (∠ CAD) = 30°

1 Prove that : △ ABD ≡ △ ACD

2 Find : m (∠ CAB)

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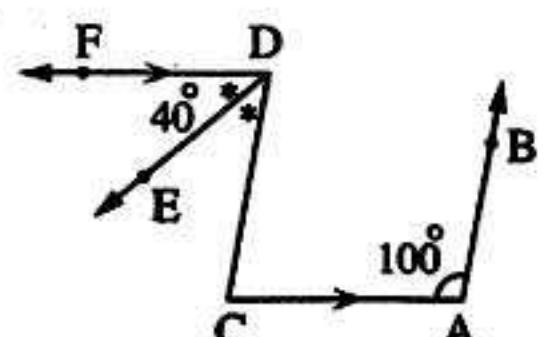
4 **[a]** In the opposite figure :

$\overrightarrow{DF}$ // $\overrightarrow{AC}$, m (∠ A) = 100°

, $\overrightarrow{DE}$ bisects ∠ FDC , m (∠ FDE) = 40°

1 Find : m (∠ FDC) and m (∠ C)

2 Prove that : $\overrightarrow{CD}$ // $\overrightarrow{AB}$
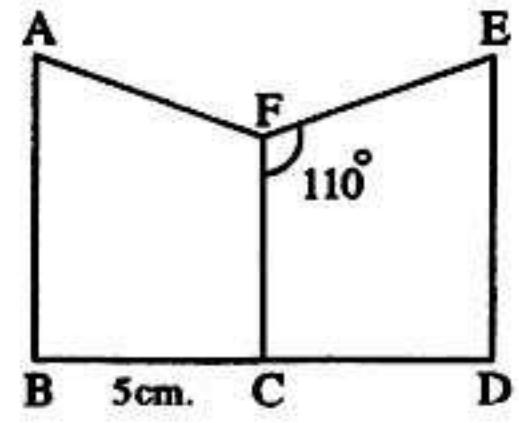
[b] In the opposite figure :

The polygon ABCF ≡ the polygon EDCF

, m (∠ EFC) = 110° , BC = 5 cm.

Find : **1** m (∠ AFC) , m (∠ AFE) and m (∠ FCB)
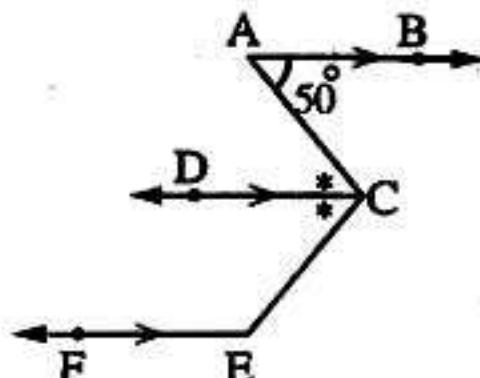
2 The length of $\overline{BD}$

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5 **[a]** In the opposite figure :

$\overrightarrow{AB}$ // $\overrightarrow{CD}$ // $\overrightarrow{EF}$, $\overrightarrow{CD}$ bisects ∠ ACE

, m (∠ A) = 50°

Find : m (∠ ACE) and m (∠ E)

[b] Using the ruler and compasses , draw the triangle ABC in which BC = 6 cm.

, AB = AC = 5 cm. Draw $\overrightarrow{AD}$ ⊥ $\overrightarrow{BC}$ where $\overrightarrow{AD}$ ∩ $\overrightarrow{BC}$ = {D}

(Don't remove the arcs)

10 **El-Monofia Governorate** | Kwesna Educational Directorate Mathematics Supervision

Answer the following questions : (Calculator is permitted)

1 **Choose the correct answer :**

1 The sum of the measures of the accumulative angles at a point equlas ⋯⋯⋯°

(a) 90   (b) 180   (c) 270   (d) 360

2 If two triangles ABC and XYZ are congruent , then ⋯⋯⋯⋯

(a) BC = XZ   (b) YX = CA   (c) ZY = CB   (d) AB = YZ

3 If a straight line intersects two parallel straight lines , then each two interior angles in the same side of the transversal are ⋯⋯⋯⋯

(a) equal.   (b) supplementary.   (c) corresponding.   (d) complementary.

4 If Δ ABC ≡ Δ XYZ , m (∠ A) + m (∠ B) = 115° , then m (∠ Z) = ⋯⋯⋯°

(a) 115   (b) 65   (c) 15   (d) 70

5 If m (∠ A) = 90° , then m (reflex ∠ A) = ⋯⋯⋯

(a) 270   (b) 180   (c) 90   (d) 360

6 If ∠ A supplements ∠ B and ∠ A ≡ ∠ B , then m (∠ B) = ⋯⋯⋯°

(a) 45   (b) 90   (c) 120   (d) 60

2 **Complete each of the following :**

1 The angle whose measure is 40° complements an angle of measure ⋯⋯⋯°
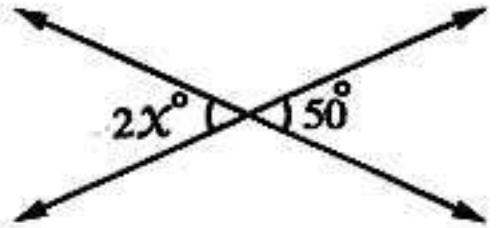
2 Two triangles are congruent if two sides and the ⋯⋯⋯ in one of them are congruent to their corresponding parts of the other.

3 If two straight lines are perpendicular to a third line , then these two straight lines are ⋯⋯⋯

4 If L_1 // L_2 and L_1 ⊥ L_3 , then L_3 ⋯⋯⋯ L_2

5 In the opposite figure :
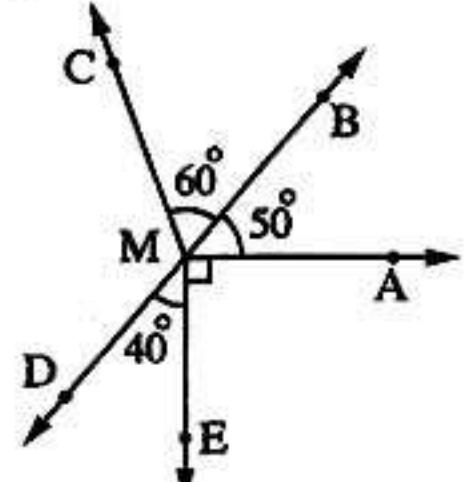
χ = ...

---

3 **[a]** In the opposite figure :

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m (∠ AMB) = 50°

, m (∠ BMC) = 60°

, m (∠ DME) = 40° and $\overrightarrow{MA} \perp \overrightarrow{ME}$

Find : m (∠ DMC)
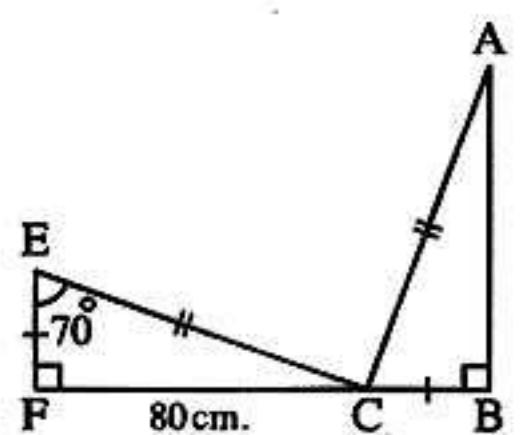
[b] In the opposite figure :

CB = FE , AC = EC

, m (∠ B) = m (∠ F) = 90°

, m (∠ E) = 70° and FC = 80 cm.

Find : m (∠ A) and the length of $\overline{AB}$

---

4 **[a]** Draw the angle ABC where m (∠ B) = 130° , using the ruler and the compasses bisect ∠ B
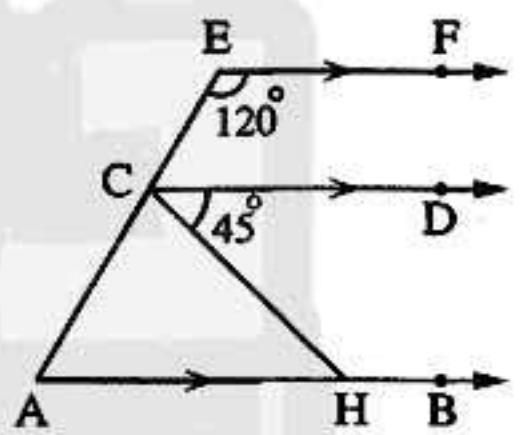
[b] In the opposite figure :

$\overrightarrow{EF} // \overrightarrow{CD} // \overrightarrow{AB}$

, m (∠ CEF) = 120°

, m (∠ HCD) = 45°

Find : The measures of the angles of Δ AHC

---
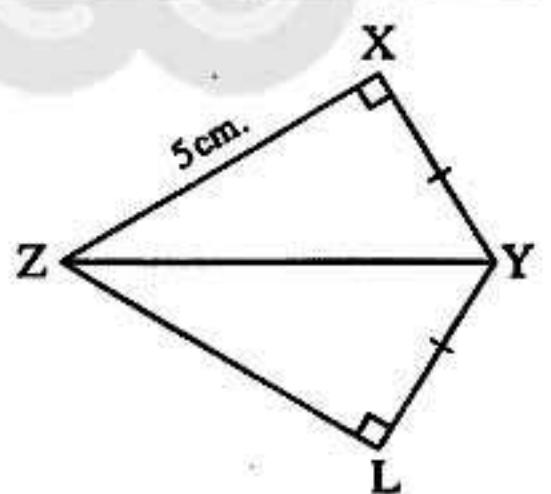
5 **[a]** In the opposite figure :

m (∠ ZXY) = m (∠ ZLY) = 90°

, XY = LY and ZX = 5 cm.

1 Is Δ YXZ ≡ Δ YLZ ? Why ?

2 Find : The length of $\overline{ZL}$
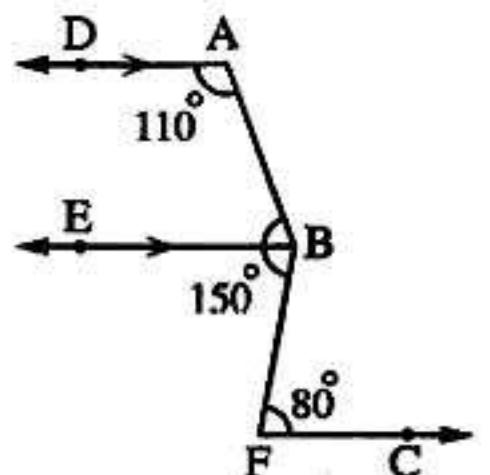
[b] In the opposite figure :

$\overrightarrow{AD} // \overrightarrow{BE}$

, m (∠ F) = 80°

, m (∠ A) = 110° and m (∠ ABF) = 150°

Is $\overrightarrow{BE} // \overrightarrow{FC}$? (Give reason)

11 | El-Dakahlia Governorate | Talkha Educational Directorate A.M.D.L School

Answer the following questions :
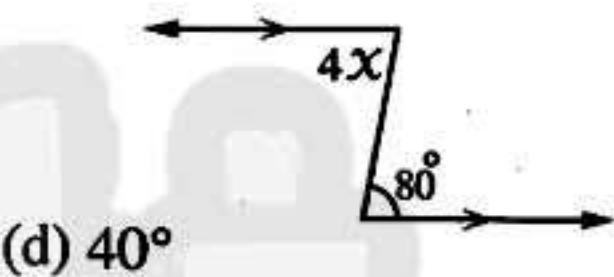
1 **Choose the correct answer :**

① The sum of measures of the accumulative angles at a point is ⋯⋯⋯

(a) 180°   (b) 90°   (c) 360°   (d) 60°

② The acute angle supplements ⋯⋯⋯ angle.

(a) an acute   (b) an obtuse   (c) a right   (d) a reflex

③ The two straight lines parallel to a third straight line are ⋯⋯⋯

(a) intersecting.   (b) congruent.   (c) parallel.   (d) perpendicular.

④ If $\triangle ABC \equiv \triangle DEF$, $m(\angle A) + m(\angle B) = 110°$, then $m(\angle F) = $ ⋯⋯⋯

(a) 180°   (b) 110°   (c) 80°   (d) 70°

⑤ In the opposite figure :

$x = $ ⋯⋯⋯

(a) 80°   (b) 100°   (c) 20°   (d) 40°

⑥ $\overrightarrow{AB} \cup \overrightarrow{AC} = $ ⋯⋯⋯

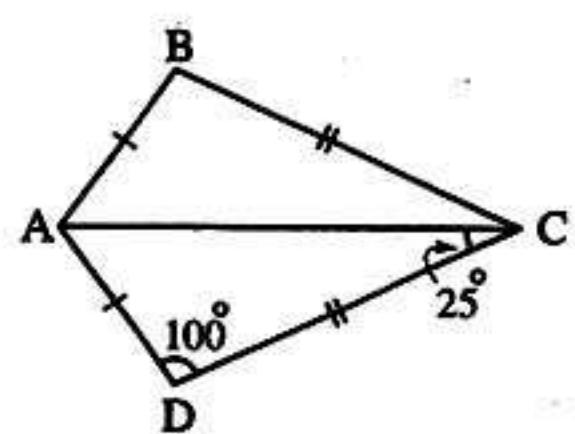(a) $\overrightarrow{AB}$ (b) $\angle ABC$ (c) $\angle BAC$ (d) $\varnothing$

2 **Complete the following :**

① The complement of an angle of measure 75° is an angle of measure ⋯⋯⋯

② If $m(\angle A) = 160°$, then $m(\text{reflex } \angle A) = $ ⋯⋯⋯ °

③ If two straight lines intersect , then the measures of each two vertically opposite angles are ⋯⋯⋯

④ If $\overline{AB} \equiv \overline{XY}$, then $AB - XY = $ ⋯⋯⋯

⑤ If $\angle A$ supplements $\angle B$ and $\angle A \equiv \angle B$, then $m(\angle B) = $ ⋯⋯⋯ °

3 **[a]** State any two cases of congruency of two triangles.

[b] From the opposite figure :

① Prove that : $\triangle ABC \equiv \triangle ADC$

② Find : $m(\angle BAC)$

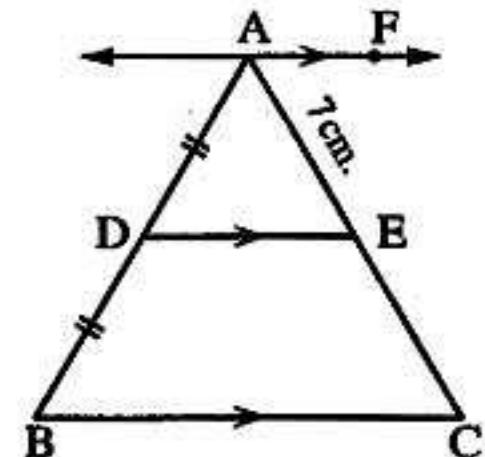**4** **[a]** In the opposite figure :

$\overleftrightarrow{AF} \parallel \overline{DE} \parallel \overline{BC}$

, D is the midpoint of $\overline{AB}$

, AE = 7 cm.

Find : AC

[b] Using the geometric instruments , draw $\triangle ABC$ in which BC = 6 cm. , AB = AC = 5 cm.

, then draw $\overline{AD} \perp \overline{BC}$ where $\overline{AD} \cap \overline{BC} = \{D\}$, **Find by measuring :** AD
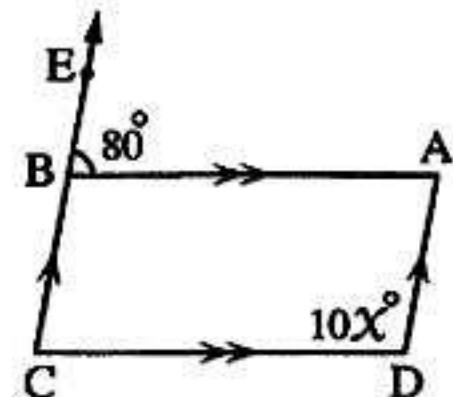
(Don't remove the arcs)

5 **[a]** In the opposite figure :

$\overleftrightarrow{AB} \parallel \overleftrightarrow{DC}$, $\overleftrightarrow{BC} \parallel \overleftrightarrow{AD}$

, $E \in \overleftrightarrow{BC}$, m (∠ D) = 10 $x°$

, m (∠ ABE) = 80°

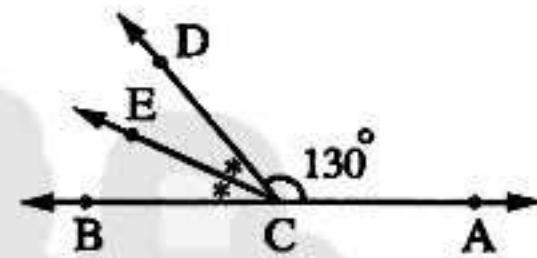**Find :** The value of x

[b] In the opposite figure :

$C \in \overleftrightarrow{AB}$, m (∠ ACD) = 130° , $\overrightarrow{CE}$ bisects ∠ BCD

Find : m (∠ DCE)

(12) Ismailia Governorate   Directorate of Education   Math's Supervision

Answer the following questions :

1 **Choose the correct answer :**

1 The angle of measure 60° supplements an angle of measure ·············°

(a) 40   (b) 30   (c) 120   (d) 90

2 If two straight lines are perpendicular to a third , then the two straight lines are ·············

(a) perpendicular.   (b) intersecting.   (c) parallel.   (d) congruent.

3 If $\triangle ABC \equiv \triangle XYZ$, m (∠ A) + m (∠ B) = 140° , then m (∠ Z) = ·············°

(a) 60   (b) 40   (c) 80   (d) 140

4 The number of axes of symmetry of the square equals ·············

(a) 1   (b) 2   (c) 3   (d) 4

5 If a straight line cuts two parallel lines , then each two corresponding angles are ·············

(a) equal in measure.   (b) complementary.

(c) supplementary.   (d) right.

6 If m ($\angle$ A) = 100° , then m (reflex $\angle$ A) = ...°

    (a) 80   (b) 260   (c) 50   (d) 100

2 **Complete the following :**
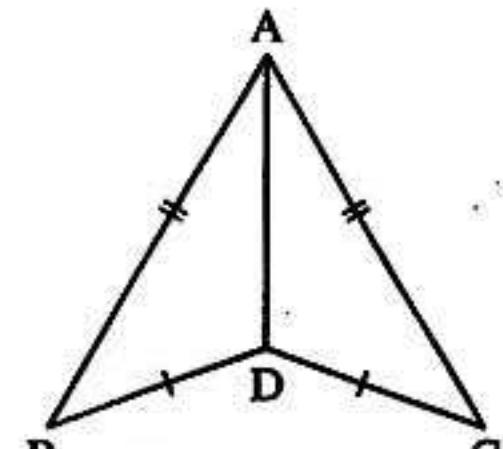
1 If two adjacent angles are complementary , then their outer sides are ....

2 If $\triangle$ ABC $\equiv$ $\triangle$ XYZ , then AC = ...

3 If $\angle$ C $\equiv$ $\angle$ D ,   m ($\angle$ C) = 90° , then m ($\angle$ D) = ...°

4 The measure of the straight angle equals ....°

5 The perimeter of a square is 40 cm. , then its side length is .... cm.

3 **[a] In the opposite figure :**

    AC = AB

    , DC = DB

    Is $\triangle$ ADB $\equiv$ $\triangle$ ADC ? Why ?
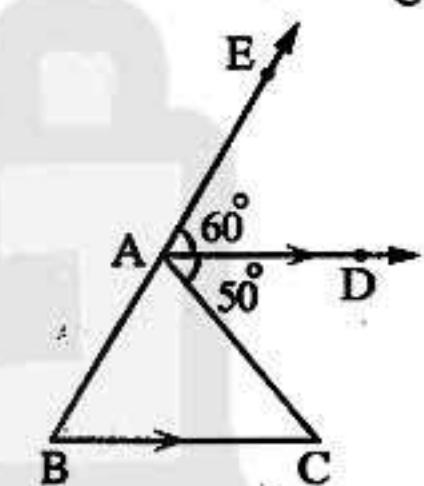
[b] In the opposite figure :

    $\overrightarrow{AD}$ // $\overrightarrow{BC}$

    , m ($\angle$ EAD) = 60°

    , m ($\angle$ CAD) = 50°

    Find : **1** m ($\angle$ C)   **2** m ($\angle$ B)   **3** m ($\angle$ BAC)

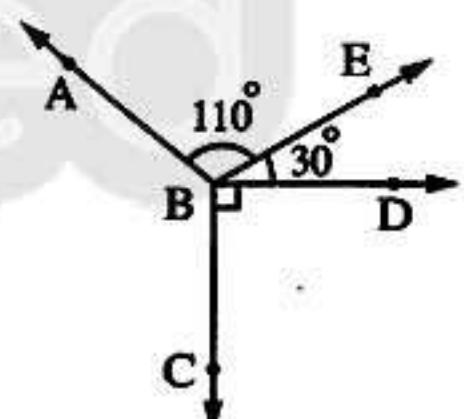**4** **[a] In the opposite figure :**

    m ($\angle$ DBE) = 30°

    , $\angle$ CBD is a right angle

    , m ($\angle$ EBA) = 110°

    Find : m ($\angle$ ABC)

[b] Draw $\overline{AB}$ of length 6 cm. and bisect it.   (Don't remove the arcs)
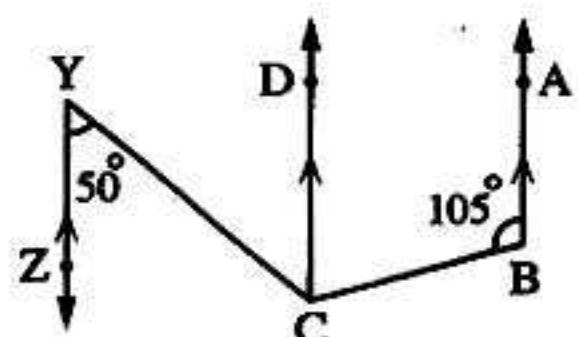
5 **[a] In the opposite figure :**

    $\overrightarrow{BA}$ // $\overrightarrow{CD}$ // $\overrightarrow{YZ}$

    , m ($\angle$ ABC) = 105°

    , m ($\angle$ ZYC) = 50°

    Find : **1** m ($\angle$ YCD)   **2** m ($\angle$ BCD)   **3** m ($\angle$ BCY)
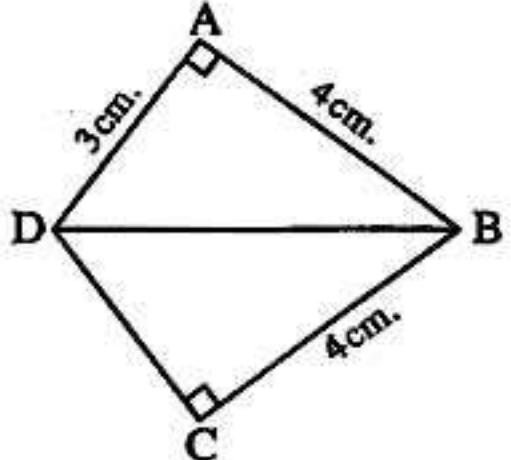
[b] In the opposite figure :

AB = BC = 4 cm. , AD = 3 cm.

, m (∠ A) = m (∠ C) = 90°

1 Is △ ABD ≡ △ CBD ? Why ?

2 Find : The length of $\overline{CD}$

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13 Damietta Governorate — Damietta Inspection of Mathematics Official Language Schools

Answer the following questions :

1 Choose the correct answer :

1 If ∠ X supplements ∠ Y and ∠ X ≡ ∠ Y , then m (∠ X) = ·············°

(a) 45 (b) 90 (c) 180 (d) 360

2 If △ ABC ≡ △ XYZ , then ·············

(a) AB = YZ (b) BC = XZ (c) YX = CA (d) ZY = CB

3 The centimeter cube is a unit for measuring the ·············

(a) perimeter. (b) area. (c) volume. (d) length.

4 Two straight lines are perpendicular to a third line , then the two straight lines are ·············

(a) perpendicular. (b) parallel. (c) congruent. (d) intersecting.
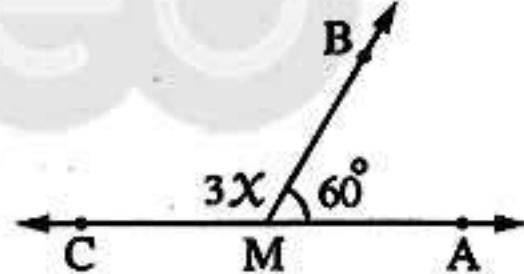
5 $\overline{XY}$ ············· $\overrightarrow{XY}$

(a) ∉ (b) ∈ (c) ⊂ (d) ⊄

6 In the opposite figure :

If $\overrightarrow{AC} \cap \overrightarrow{MB} = \{M\}$

, then the value of x = ·············°

(a) 20 (b) 30 (c) 40 (d) 60

2 Complete each of the following :

1 If m (∠ A) = 120° , then m (reflex ∠ A) = ·············°

2 If the perimeter of a square is 20 cm. , then its area equals ············· cm²

3 The number of edges of the cuboid is ·············

4 If a straight line cuts two parallel straight lines , then each two alternate angles are ·············

5 If $\overline{AB} \equiv \overline{CD}$, then AB − CD = ·············

نفوقك فى أى عمل عليه العلامة دى
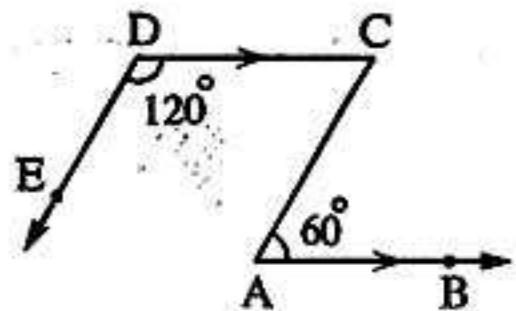
3 **[a]** In the opposite figure :

$\overrightarrow{AB}$ // $\overleftrightarrow{DC}$

, m (∠ A) = 60°

, m (∠ D) = 120°

1 Find : m (∠ C) **2** Is $\overrightarrow{AC}$ // $\overrightarrow{DE}$? Why ? (Write the steps)

[b] Draw ∠ ABC where m (∠ B) = 115° Using the ruler and compasses bisect ∠ B by $\overrightarrow{BD}$

(Don't remove the arcs)

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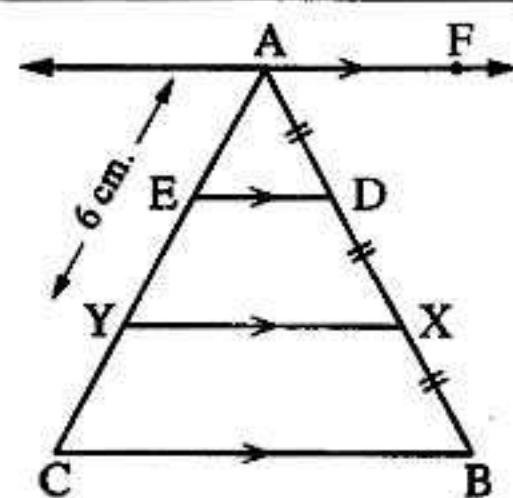
4 **[a]** In the opposite figure :

$\overleftrightarrow{AF}$ // $\overleftrightarrow{DE}$ // $\overleftrightarrow{XY}$ // $\overleftrightarrow{BC}$

, AD = DX = XB

, AY = 6 cm.

Find : The length of $\overline{AC}$ (Give the reason)

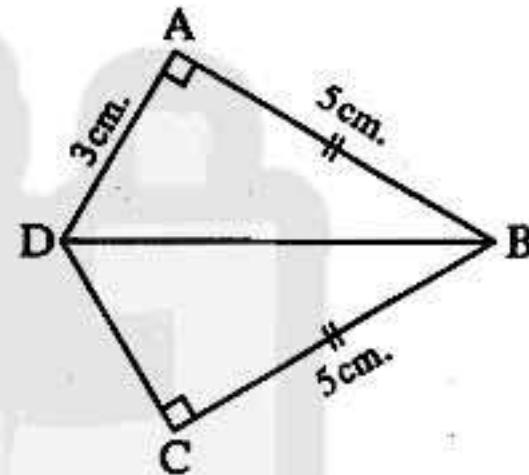**[b]** In the opposite figure :

m (∠ BAD) = m (∠ BCD) = 90°

, AB = CB = 5 cm. , AD = 3 cm.

Mention the conditions for Δ ABD , Δ CBD to be congruent

, **then find :** The length of $\overline{CD}$

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5 **[a]** In the opposite figure :
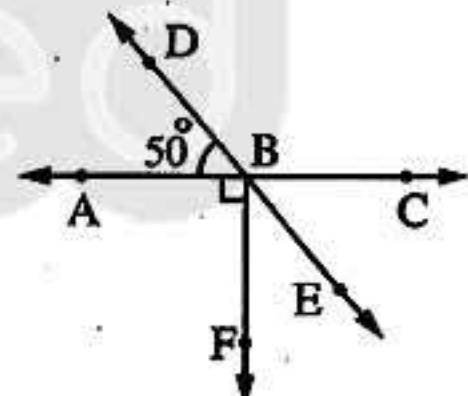
$\overleftrightarrow{AC}$ ∩ $\overleftrightarrow{DE}$ = {B}

, m (∠ ABD) = 50°

, m (∠ ABF) = 90°

Find showing the steps :

1 m (∠ DBC) **2** m (∠ CBE) **3** m (∠ FBE)

[b] In the opposite figure :
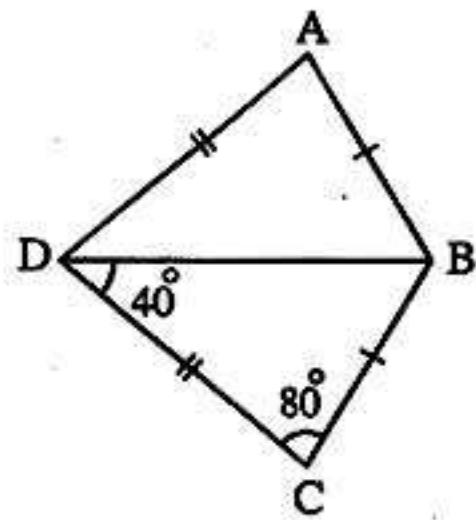
AB = BC , AD = CD

, m (∠ C) = 80°

, m (∠ BDC) = 40°

Is Δ CBD ≡ Δ ABD ? Why ?

and find : m (∠ ABD)

(14) Souhag Governorate · Maths Supervision

Answer the following questions :

1 **Choose the correct answer :**

[1] If ∠ X ≡ ∠ Y and ∠ X , ∠ Y are supplementary angles , then m (∠ X) = ···········

(a) 45°   (b) 90°   (c) 135°   (d) 180°

[2] If two straight lines are perpendicular to a third line , then the two straight lines are ···········

(a) perpendicular.   (b) parallel.   (c) congruent.   (d) intersecting.

[3] If △ XYZ ≡ △ ABC and m (∠ A) + m (∠ B) = 100° , then m (∠ Z) = ···········

(a) 50°   (b) 80°   (c) 100°   (d) 360°

[4] The angle whose measure is more than 90° and less than 180° is ···········

(a) obtuse.   (b) acute.   (c) right.   (d) straight.

[5] If m (∠ X) = 2 m (∠ Y) , ∠ X and ∠ Y are two complementary angles , then m (∠ Y) = ···········

(a) 90°   (b) 45°   (c) 30°   (d) 15°

[6] The sum of the measures of the accumulative angles at a point is ···········

(a) 45°   (b) 90°   (c) 180°   (d) 360°

2 **Complete each of the following :**

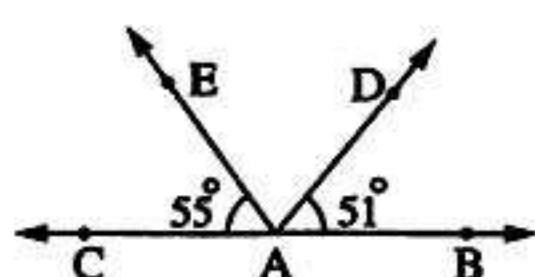[1] If two straight lines intersects , then each two vertically opposite angles are ···········

[2] If △ ABC ≡ △ XYZ , then XZ = ···········

[3] If ∠ A supplements ∠ B , m (∠ A) = 100° , then m (reflex ∠ B) = ···········°

[4] In the opposite figure :

A ∈ $\overleftrightarrow{CB}$

, then m (∠ DAE) = ···········°
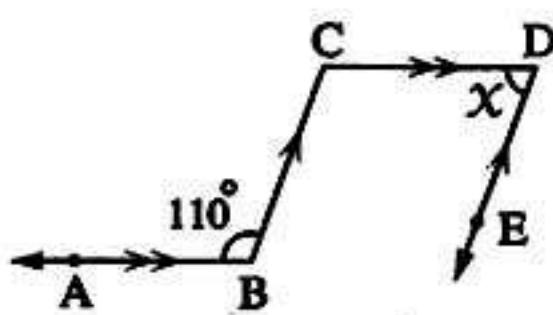
[5] In the opposite figure :

$\overrightarrow{CD}$ // $\overrightarrow{BA}$

, $\overrightarrow{DE}$ // $\overline{CB}$

, then $\mathcal{X}$ = ···········°

3 [a] In the opposite figure :
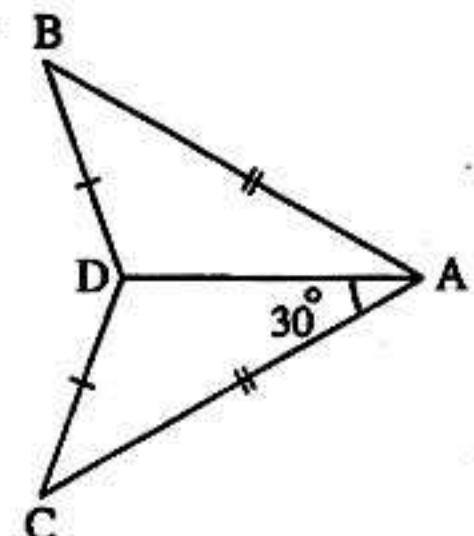
AB = AC

, BD = DC

, m (∠ CAD) = 30°

[1] **Prove that :** △ ABD ≡ △ ACD

[2] **Find :** m (∠ CAB)

[b] Using the ruler and the compasses , draw the angle ABC where m (∠ ABC) = 110°
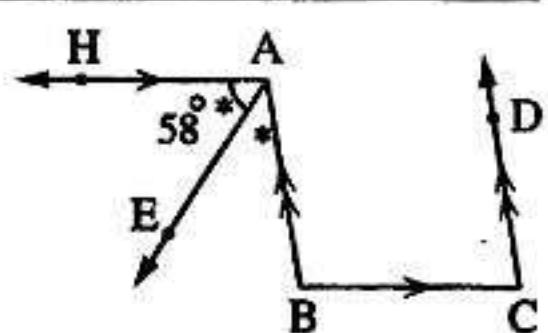
and draw $\overrightarrow{BD}$ to bisect the angle.   (Don't remove the arcs)

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4 [a] In the opposite figure :

$\overrightarrow{CD}$ // $\overrightarrow{BA}$, $\overrightarrow{CB}$ // $\overrightarrow{AH}$

, $\overrightarrow{AE}$ bisects ∠ BAH , m (∠ EAH) = 58°

Find : m (∠ C)
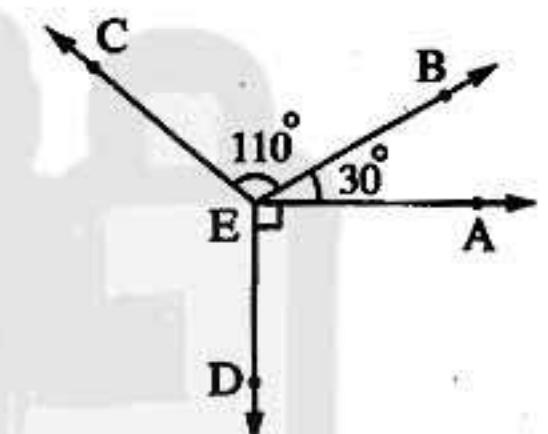
[b] In the opposite figure :
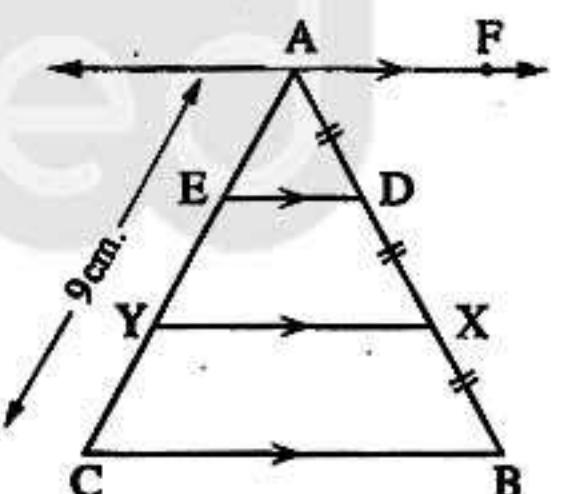
m (∠ AEB) = 30° , m (∠ BEC) = 110°

, m (∠ AED) = 90°

Find : m (∠ DEC)

---

5 [a] In the opposite figure :

$\overrightarrow{AF}$ // $\overline{ED}$ // $\overline{YX}$ // $\overline{CB}$

, AD = DX = XB

, AC = 9 cm.

Find : The length of $\overline{AY}$

[b] In the opposite figure :

m (∠ A) = m (∠ C) = 90° , m (∠ ABD) = 31°
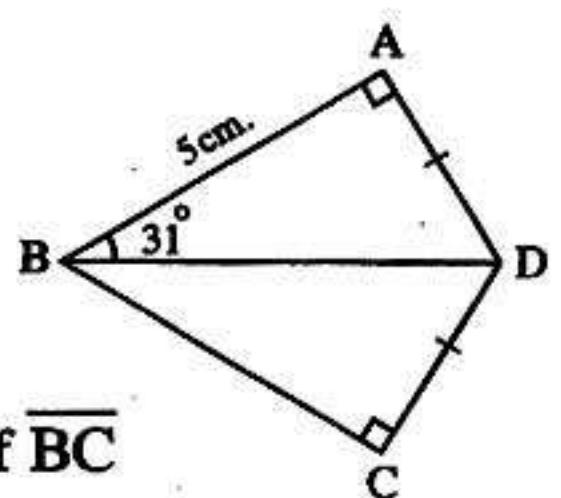
, AB = 5 cm.

, AD = CD

[1] **Prove that :** △ ABD ≡ △ CBD   [2] **Find :** The length of $\overline{BC}$

[3] **Find :** m (∠ CBD)

15   Luxor Governorate   Luxor Directorate
El-Salam Language School

Answer the following questions :

1 **Choose the correct answer :**

1 A square is of side length 7 cm. , then its perimeter = ·············· cm.

     (a) 14   (b) 21   (c) 24   (d) 28

2 The circumference of the circle = ··············

     (a) 2π (b) $2\pi r$ (c) πr (d) πr^2

3 The sum of measures of the accumulative angles at a point equals ·············°

     (a) 360   (b) 180   (c) 603   (d) 150

4 If $L_1 /\!/ L_3$, $L_2 /\!/ L_3$, then ··············

     (a) $L_1 /\!/ L_2$ (b) $L_1 \perp L_2$ (c) $L_2 \perp L_3$ (d) $L_1 \perp L_3$

5 The measure of the supplement of the angle whose measure is 30° equals ··············°

     (a) 60   (b) 180   (c) 150   (d) 90

6 If $\angle X$ complements $\angle Y$ and $\angle X \equiv \angle Y$, then m $(\angle X)$ = ··············°

     (a) 45   (b) 90   (c) 180   (d) 360

2 **Complete :**

1 Two triangles are congruent if two sides and ·············· of one triangle are congruent to their corresponding parts of the other triangle.

2 If m $(\angle A)$ = 105° , then m (reflex $\angle A$) = ··············°

3 If $\triangle ABC \equiv \triangle XYZ$, then $\overline{AC} \equiv$ ··············
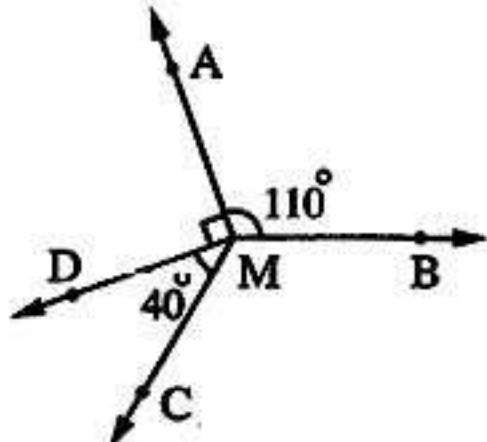
4 If a straight line intersects two parallel lines , then each two corresponding angles are ··············

5 In $\triangle ABC$, if m $(\angle A)$ = 50° , m $(\angle B)$ = 40° , then m $(\angle C)$ = ··············°

3 **[a] In the opposite figure :**

     m $(\angle AMB)$ = 110° , m $(\angle AMD)$ = 90°

     , m $(\angle DMC)$ = 40°

     Find : m $(\angle BMC)$ (With steps)

[b] Using the geometric tools ، draw ∠ ABC whose measure is 90°

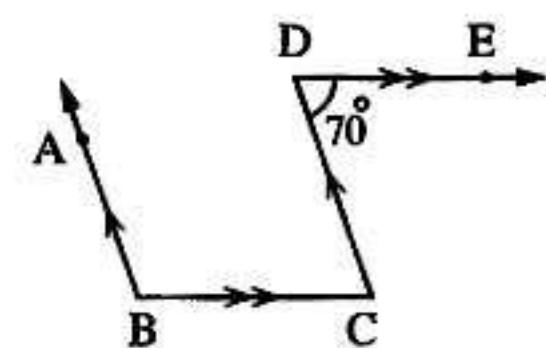, then draw $\overrightarrow{BF}$ to bisect the angle.   (Don't remove the arcs)

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4 **[a]** In the opposite figure :

$\overrightarrow{DE} \parallel \overrightarrow{BC}$

, $\overrightarrow{DC} \parallel \overrightarrow{BA}$

, m (∠ D) = 70°

Find : m (∠ C) ، m (∠ B) (Give reason)

[b] In the opposite figure :

The polygon ABCD ≡ the polygon AFHD
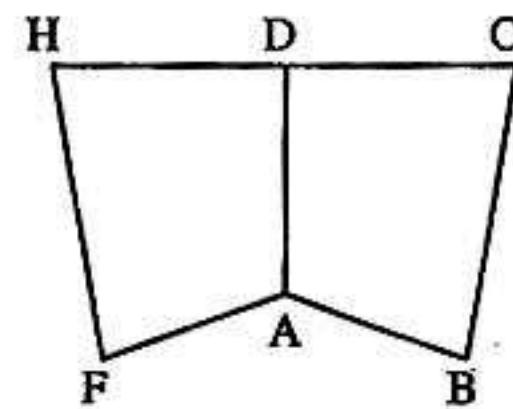
Complete :

① AB = ...   ② BC = ...

③ m (∠ C) = m (∠ ....)   ④ m (∠ F) = m (∠ ....)

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5 **[a]** In the opposite figure :
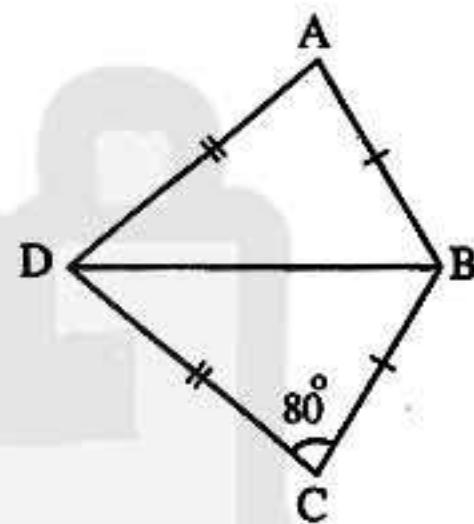
AB = BC

, AD = DC

, m (∠ C) = 80°

① **Prove that** : △ ABD ≡ △ CBD

② **Find** : m (∠ A)

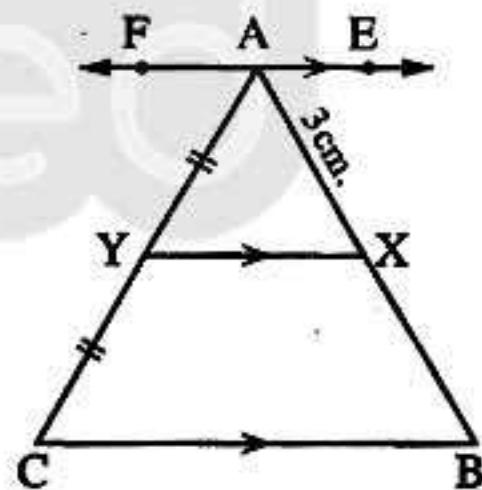**[b]** In the opposite figure :

$\overleftrightarrow{AF} \parallel \overline{XY} \parallel \overline{BC}$

, AY = YC

, AX = 3 cm.

Find : The length of $\overline{AB}$ (Give reason)