MATHS

BOOKS - CBSE COMPLEMENTARY MATERIAL MATHS (HINGLISH)

LINES AND ANGLES

1. An angle which measures more than $180°$ but less than $360°$, is called

A. Obtuse Angle

B. Straight Angle

C. Reflex Angle

D. Complete Angle

Answer: C

▶ **Watch Video Solution**

2. If three or more points does not lie on the same straight line the points are called -

A. Concurrent points

B. Collinear Points

C. Non Collinear Points

D. Adjacent Point

Answer: C

▶ **Watch Video Solution**

3. Reflex angle of $110°$ is -

A. $70°$

B. $90°$

C. $250°$

D. $190°$

Answer: D

▶ **Watch Video Solution**

4. If an angle is equal its complement , then the angle is -
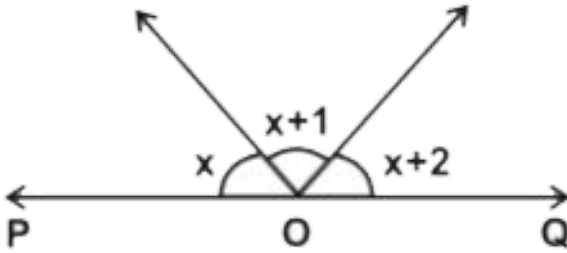
A. $90°$

B. $0°$

C. $48°$

D. $45°$

Answer: D

▶ **Watch Video Solution**

5. If the figure POQ is a straight line . The three

adjacent angles are consecutive numbers, the

measure of these angles is -

A. $50°$, $60°$, $70°$
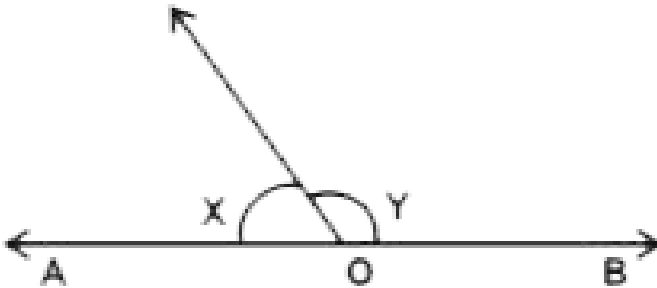
B. $59°$, $60°$, $61°$

C. $58°$, $60°$, $62°$

D. All are correct

Answer: B

▶ **Watch Video Solution**

6. In the figure, twice of x is $30°$ less than y, then the values of x & y are respectively , given OB & OA are opposite rays.

A. $130°$, $50°$

B. $50°$, $130°$

C. $100°$, $80°$

D. $75°$, $105°$

Answer: B

7. One of the angles of a pair of supplementary angles is $2°$ more than its supplement , the angles are : -
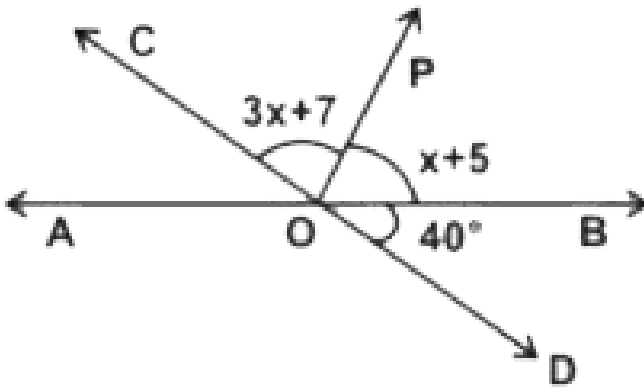
    A. $90°$, $90°$

    B. $88°$, $92°$

    C. $89°$, $91°$

    D. All are correct

Answer: C

8.

In the figure AB & CD are two straight lines intersecting at O, OP is a ray. What is the measure of $\angle AOD$.

A. $40°$

B. $100°$

C. $140°$

D. $128°$

Answer: C

▶ **Watch Video Solution**

9. If the difference between two supplementary angles is 40 then the angles are -

A. $40°$, $140°$

B. $80°$, $100°$

C. $110°$, $70°$

D. $65°$, $115°$

Answer: C

▶ **Watch Video Solution**

---

10. The angles which is four times more than its complement is

A. $120°$

B. $144°$

C. $150°$

D. $100°$

Answer: B

▶ **Watch Video Solution**

11. An exterior angle of a triangle is equal to 100^0 and two interior opposite angles are equal. Each of these angles is equal to 75^0 (b) 80^0 (c) 40^0 (d) 50^0

A. $40°$

B. $50°$

C. $80°$

D. $90°$

Answer: B

▶ **Watch Video Solution**

12. The value of x in the figure is
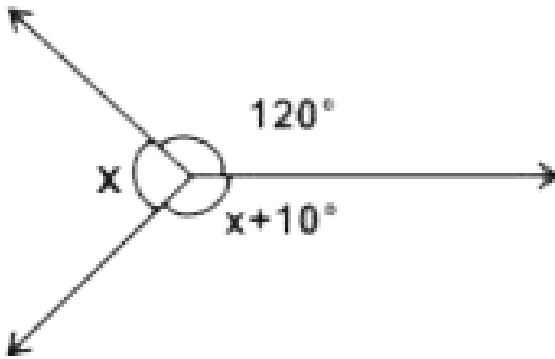
A. $230°$

B. $100°$

C. $120°$

D. $115°$

Answer: D

13. Which of the following options is correct :-

A pair of adjacent angles have.

(i)Common vertex

(ii)Common Arm.

(iii)Non Common arms are an opposite sides of common arms.

(iv)Non Common arms are on the same side of common arms.

A. (i) & (ii) are sufficient

B. (i),(ii) & (iii) are sufficient

C. (i) ,(ii) & (iv) are sufficient

D. All are sufficient

Answer: B

▶ **Watch Video Solution**

14. Angles x & y forms a linear pair and $2y - x = 30°$, the value of y is

A. $70°$

B. $110°$

C. $210°$

D. $60°$

Answer: A

▶ **Watch Video Solution**

15. The degree measure of x & y respectively in the figure are -
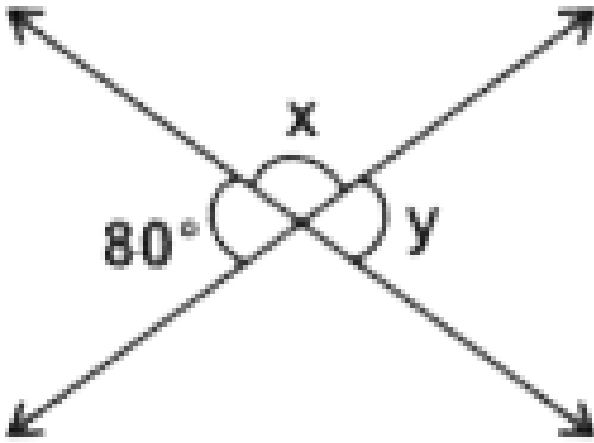
A. $80°$, $100°$

B. $100°$, $80°$

C. $80°$, $80°$

D. $100°$, $100°$

Answer: B

▶ Watch Video Solution

16. In the figure AB, CD & EF are three Straight lines intersecting at O. The measure of $\angle AOF$ is

-
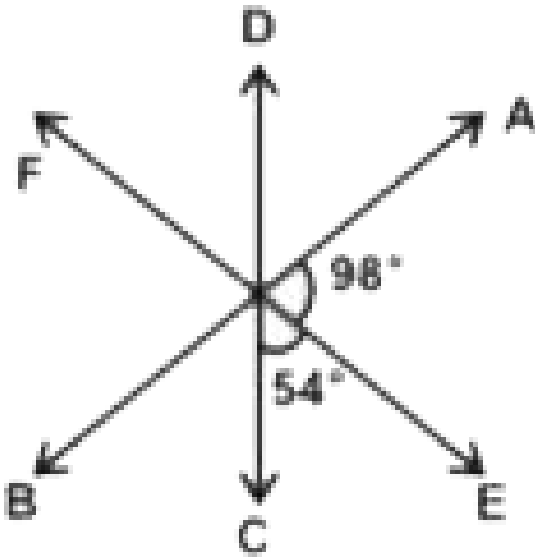
A. $98°$

B. $152°$

C. $54°$

D. $82°$

Answer: D

▶ **Watch Video Solution**

---

17. If $\angle ABC + \angle DEF = 180°$, name the pair of angles $\angle ABC$ & $\angle DEF$

A. Adjacent Angles

B. Complementary Angles

C. Supplementary Angle

D. V.O.A

Answer: C

⏵ **Watch Video Solution**

18. In the figure , AB||CD , what is x+y.
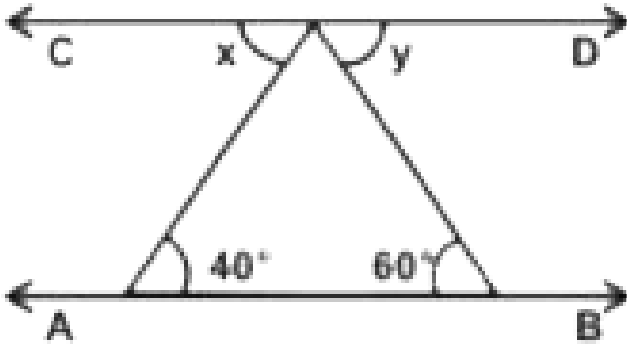
A. $40°$

B. $60°$

C. $100°$

D. $80°$

Answer: C

19. From the Figure , choose the correct option.

(i)$\angle 1$ & $\angle 8$ are alternate angles

(ii)$\angle 1$ & $\angle 7$ are alternate angles

(iii)$\angle 3$ & $\angle 5$ are alternate angles

(iv)$\angle 4$ & $\angle 8$ are corresponding angles

(v)$\angle 2$ & $\angle 6$ are not corresponding angles.

(vi)$\angle 3$ & $\angle 8$ are interior angles on the same side
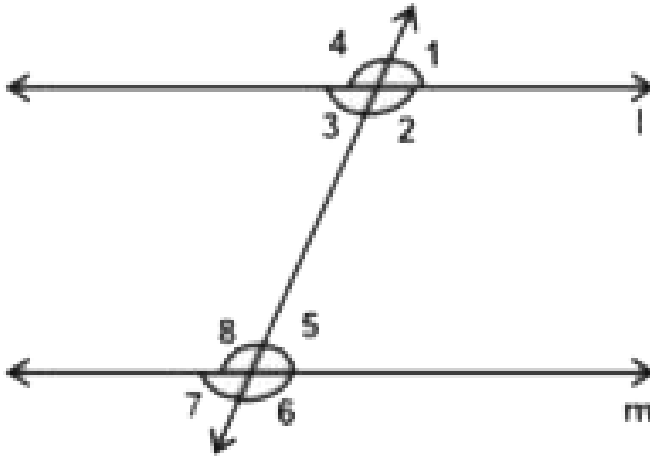
of the transversal.

A. (i),(iii),(iv) ,(v) are correct

B. (i),(ii),(iii) are correct

C. (ii),(iii),(iv),(vi) are correct

D. (ii),(iii),(iv),(v) are correct

Answer: C

Watch Video Solution

20. If two parallel lines are intersected by a transversal , then the interior angles on the same side of the transversal are -

    A. equal

    B. adjacent

    C. Supplementary

    D. Complementary

Answer: C

▶ **Watch Video Solution**

21. In the figure , measure of x is -
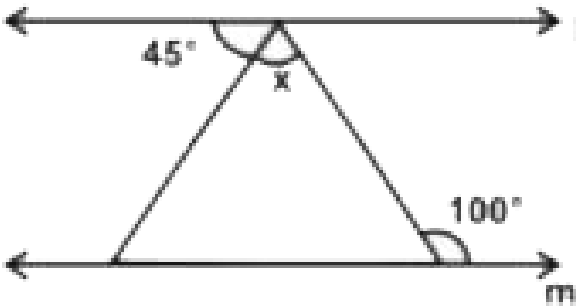
A. $65°$

B. $55°$

C. $100°$

D. $80°$

Answer: B

22. In the figure , l||m & l||n then x is -
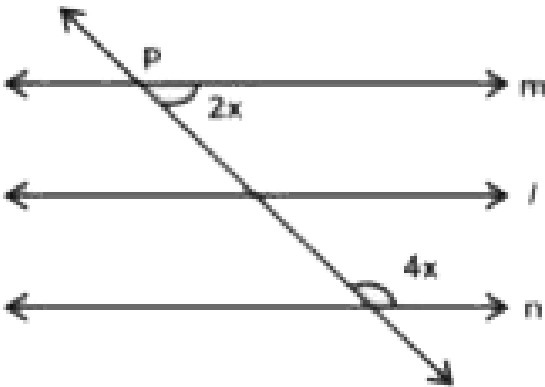
A. $90°$

B. $45°$

C. $30°$

D. $60°$

Answer: C

▶ **Watch Video Solution**

23. In the figure , if l||m what is x .
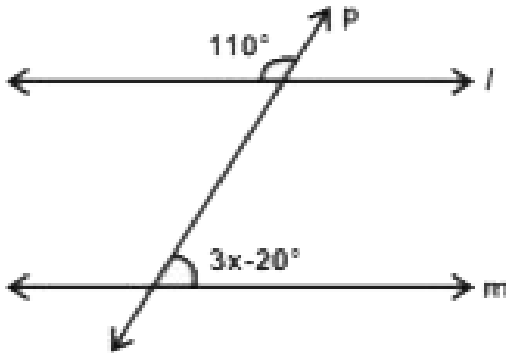
A. $30°$

B. $70\%°$

C. $43°$

D. $37°$

Answer: A

24. In the figure , AB||CD, EG & FG are Bi sectors of $\angle BEF$ & $\angle DFE$ respectively , the $m\angle FGE$ is -
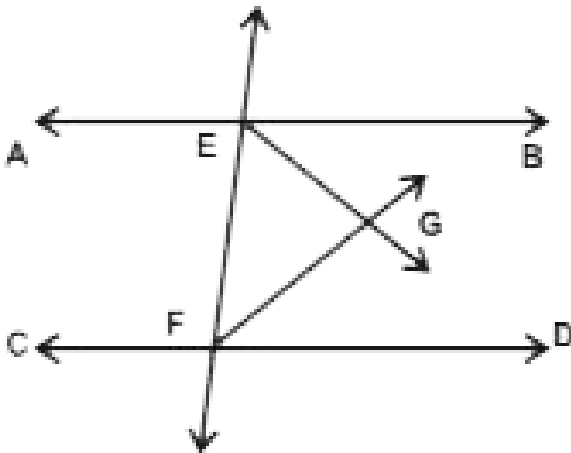
A. 45°

B. 90°

C. 60°

D. 100°

Answer: B

▶ **Watch Video Solution**

25. In the figure , l||m such that $\angle A = 110^\circ$ & $\angle B = 130^\circ$ then $\angle ACB$ is

A. 50°

B. 60°

C. 70°

D. 120°

Answer: B

▶ **Watch Video Solution**

26. The ratio of two interior angles on the same side of the transversal is 2:3 , the measure of difference of both the angles is -

A. 36°

B. 180°

C. 72°

D. 108°

Answer: A

▶ **Watch Video Solution**

---

27. In the figure , l||m ||n and AB||CD , then $\angle BCD$ is -
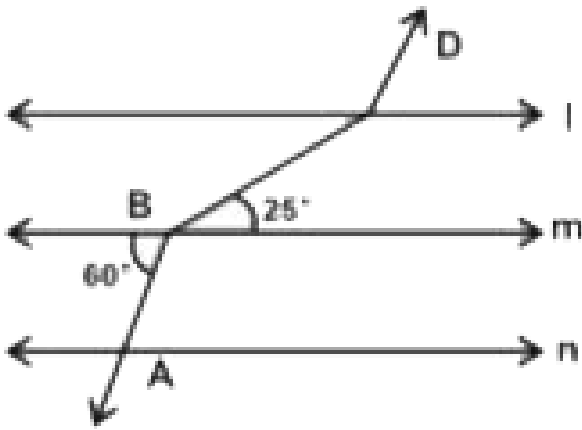
A. $120°$

B. $145°$

C. $85°$

D. $60°$

Answer: B

▶ Watch Video Solution

28. In the figure l||m , then y=_____
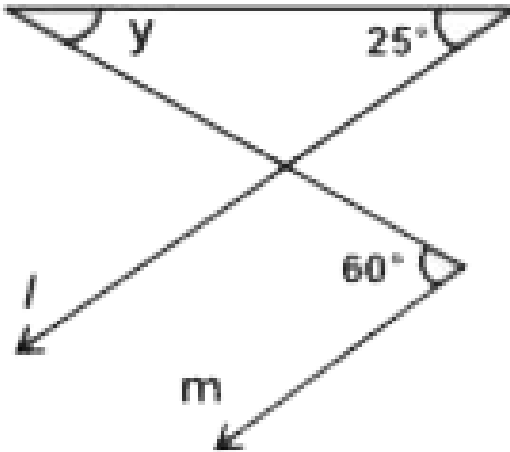
A. $145°$

B. $120°$

C. $60°$

D. $35°$

Answer: D

▶ **Watch Video Solution**

---

29. An exterior angle is drawn to a triangle, which is acute , then on the basis of angles what type of triangle is this -

A. Acute angled

B. Obtuse angled

C. Right angled

D. Scalene

Answer: B

▶ **Watch Video Solution**

---

30. In the figure what is $m\angle A$ =
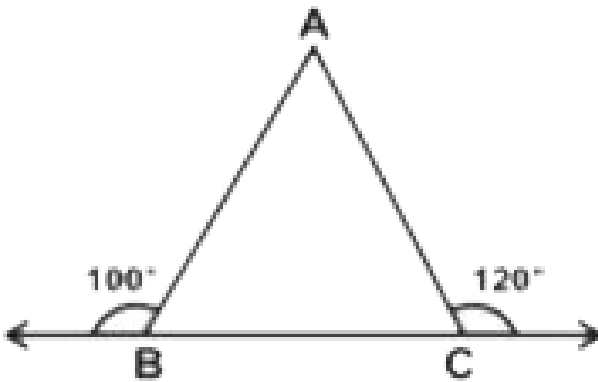
A. $80°$

B. $60°$

C. $40°$

D. $140°$

Answer: C

▶ Watch Video Solution

31. In the figure , if AB=AC if $m\angle A$ is
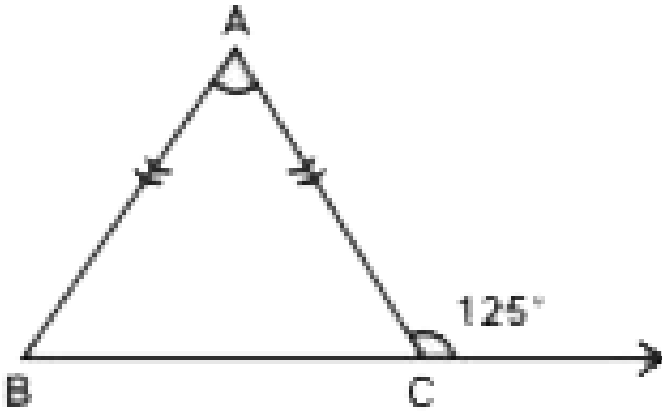
A. $55°$

B. $75°$

C. $70°$

D. $110°$

Answer: C

32. In the figure , measure of x is -
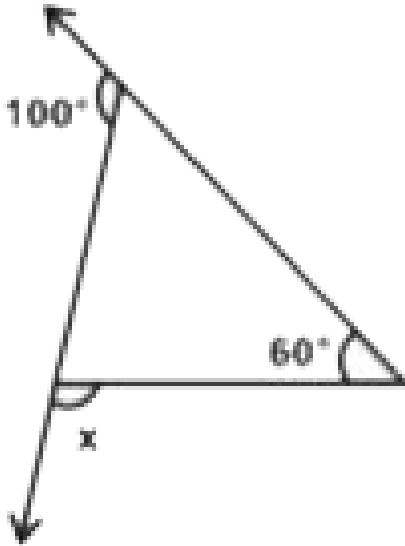
A. $100°$

B. $140°$

C. $60°$

D. $20°$

Answer: B

33. In the figure , measure of $\angle B$ is -
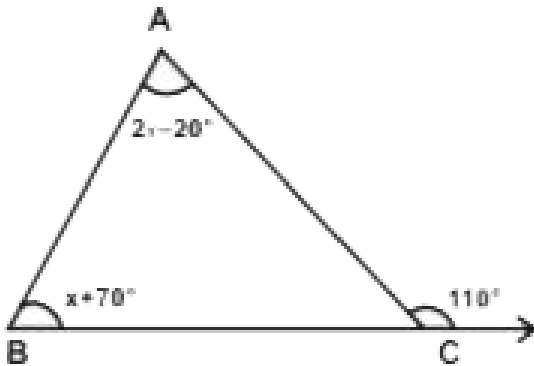
A. $90°$

B. $20°$

C. $110°$

D. $70°$

Answer: A

▶ **Watch Video Solution**

34. If one of the angles of a triangles is $120°$, then the angle between the interior bisectors of the other two angles is

A. $90°$

B. $30°$

C. $150°$

D. $60°$

Answer: A

35. If one of the angles of a triangle is 62, then the angle between the exterior bisectors of the other two angles is

A. $31°$

B. $59°$

C. $121°$

D. $118°$

Answer: B

▶ **Watch Video Solution**

---

36. If a & b forms a pair of adjacent angles then which figures proves it .

A.
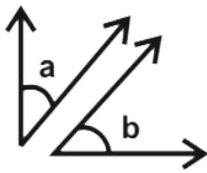
B.
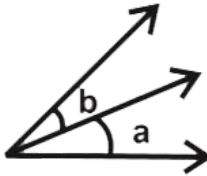
C.
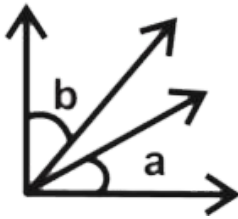
D.
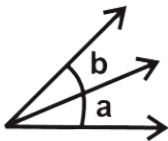
Answer: B

▶ **Watch Video Solution**

37. Two lines perpendicular to the same line are ___ to each other.

> ▶ **Watch Video Solution**

38. Two lines parallel to the same line are ___ to each other .

> ▶ **Watch Video Solution**

39. If one angle of a linear pair is acute , then its other angle will be ____

40. If the sum of two adjacent angles is $180°$, then the ___ arms of the two angles are opposite rays.

41. If OB & OA are opposite rays , in the figure then the value of x+y is ____
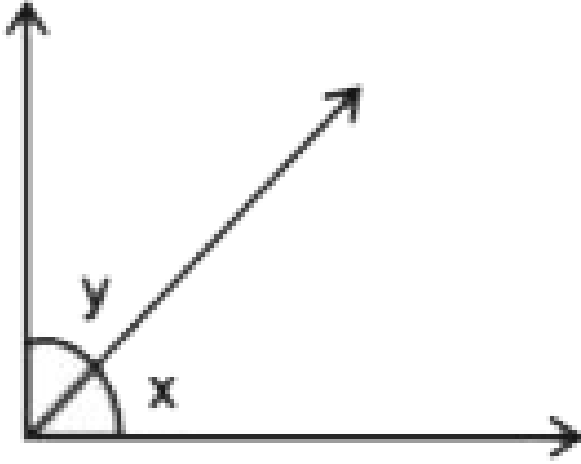
42. In the figure AB is a straight line , then the valuer of a+b is _____
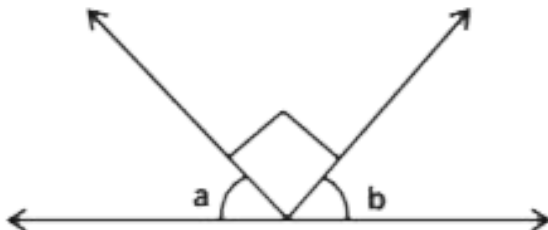
43. If $(30 - x)^\circ$ is supplement of $(125 + 2x)^\circ$

then x is ___

44. If one of the angles of formed by two intersecting lines is a right angle then the lines are ___ to each other .

45. In the figure , If AB||CD then measure of p is
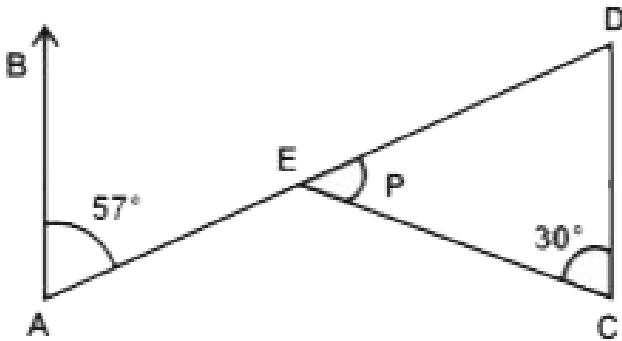
46. Exterior angle of a triangle is always ____ then either of its interior opposite angles .

1. In the adjoining figure PQ||RS find x and y.
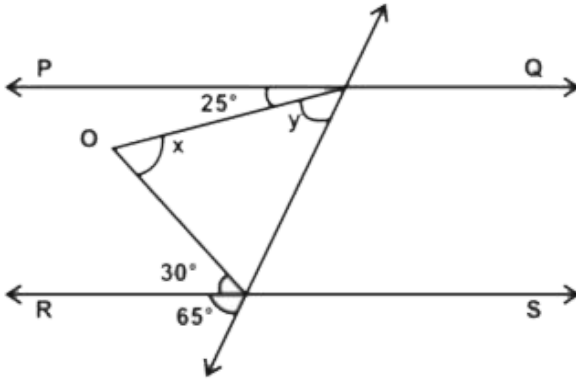
▶ **Watch Video Solution**

2. By contributing money . 5 friends bought

pizza. They want to divide it equally among

themselves. But one of them was given double piece , as he was very hungry. Find the angle of the piece of pizza each one received .

3. BO and CO are external bisector of $\angle B$ and $\angle C$ of $\triangle$ ABC intersecting at O. If $\angle A = 60°$, $\angle ABC = 70°$, Find $\angle BOC$

4. BO and CO are external bisector of $\angle B$ and $\angle C$ of $\triangle$ ABC intersecting at O. If internal bisector of $\angle B$ and $\angle C$ intersect at P, prove that $\angle PBO = 90°$ and $\angle BOC + \angle BPC = 180°$

5. In the given figure if ||m and 't' is the transversal find x .
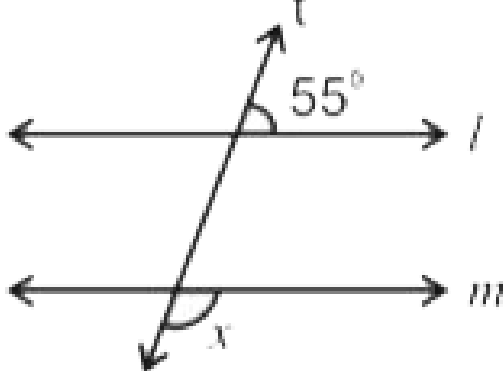
6. In the figure , If AB||CE, then find the values of p , q and r.

7. Prove that vertically opposite angles are equal.

8. In the figure , CD is the angle bisector of $\angle ECB$, $\angle B = \angle ACE$.   Prove   that $\angle ADC = \angle ACD$
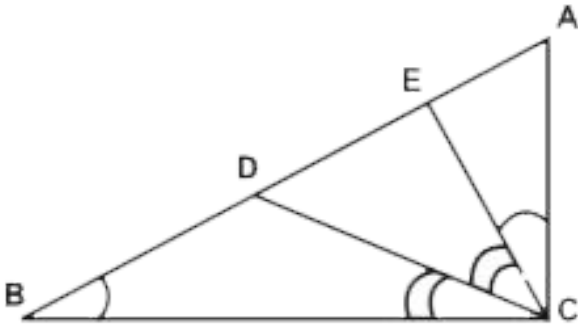
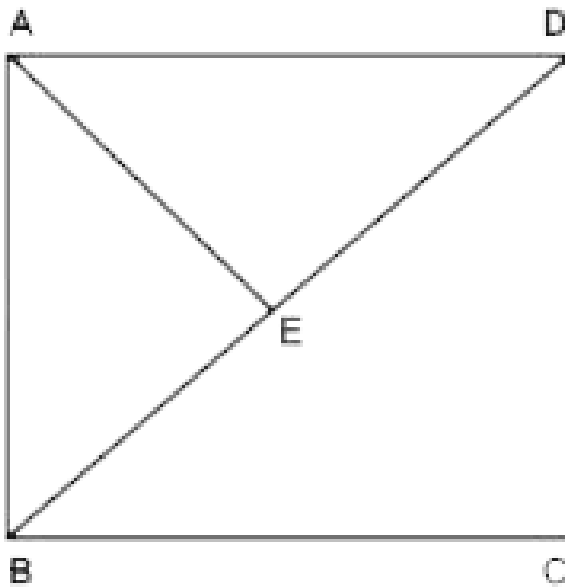**9.** In the figure, choose the pair of lines which are parallel. Give reasons also.
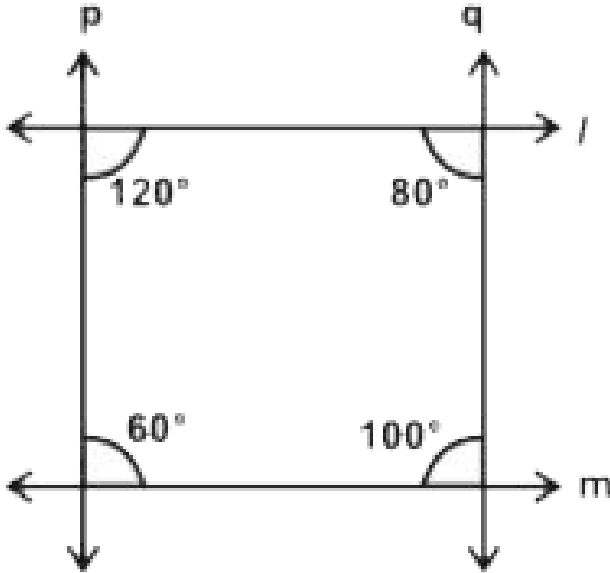
10. The angles of a triangle are $(x - 40°), (x - 20°), \left(\dfrac{x}{2} - 10°\right)$ .Find the value of x & then find the angles of the triangle.
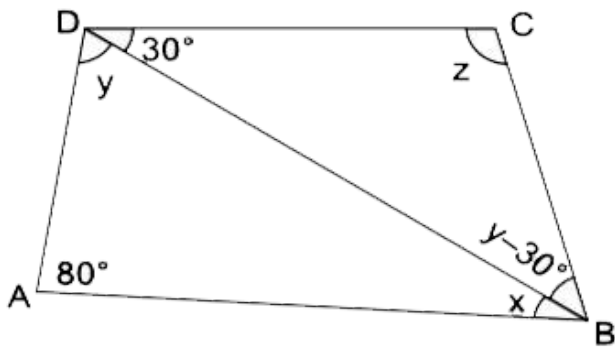
11. In the figure , if $\angle AED = \angle BDC + \angle BAE$ then show that AB||CD

12. In the given figure if AB||DC and $\angle BDC = 30°$ $\angle BAD = 80°$ find $\angle x, \angle y, \angle z.$
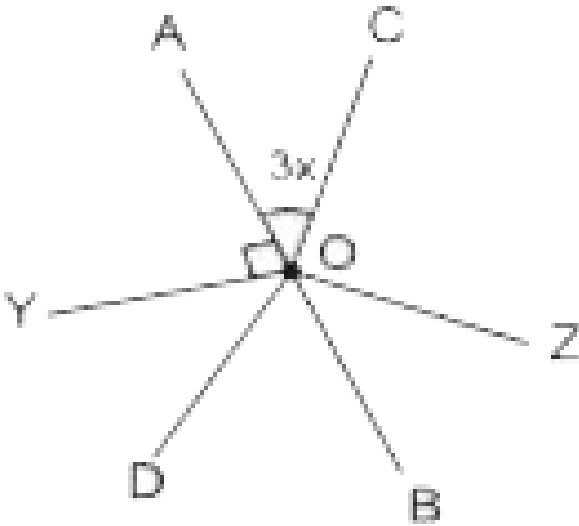
Part C

1. If one of the angles by two intersecting lines is a right angles, what can yor say about the other three angles ? Give reason for your answer.
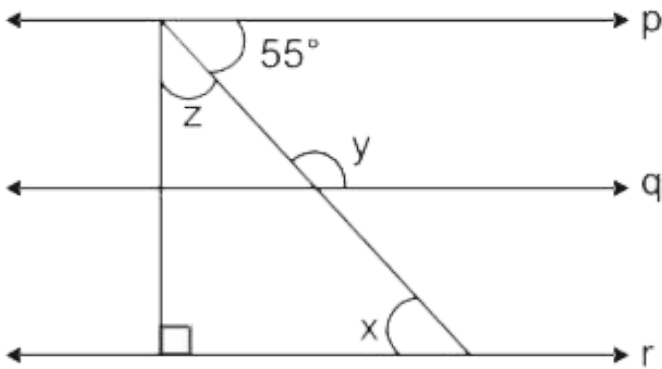
2. AB and CD are intersecting lines. OD is bisector

of $\angle BOY$. Find x.

3. If p||q||r, find x,y,z from given figure .

4. In the given figure find $\angle DCB$ if AE||CD
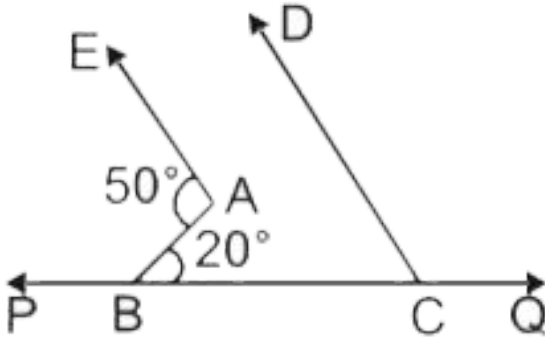
▶ **Watch Video Solution**

5. In the given figure l||m and n is the transversal , find x.

3y

2y + 25°

x+15°

n

l

m
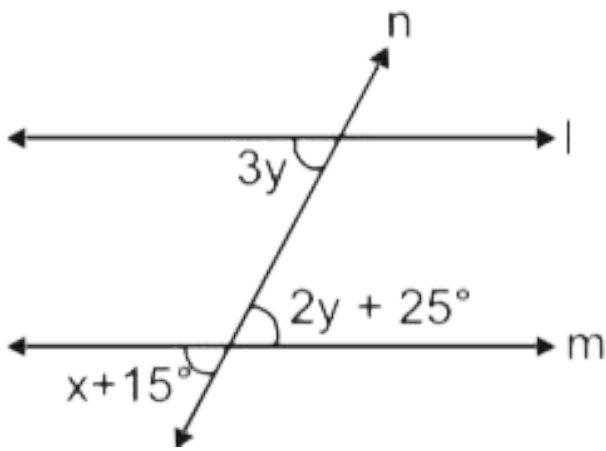
6. For what value of x , l||m.

50°

x-20°

120°

l

m
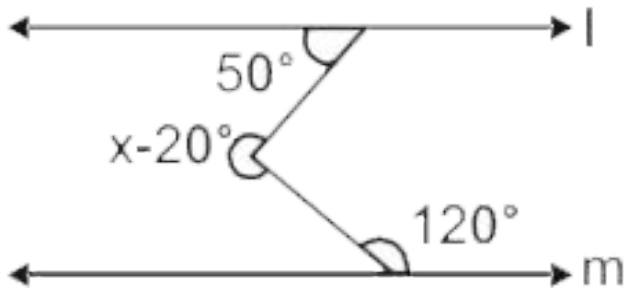
7. From the figure , find reflex angle $\angle BOD$ if

AB||CD
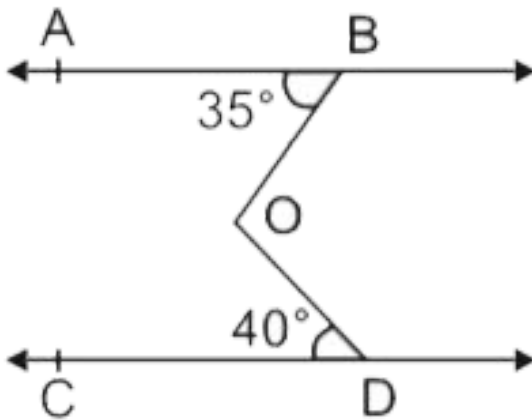
8. If the angles are in the ratio $5:3:7,$ then the triangle is
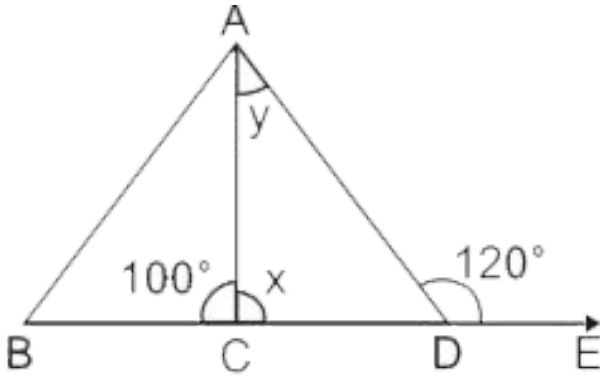
▶ **Watch Video Solution**

9. Two lines are repectively perpendicular to two parallel lines. Show that they are parallel to each other.

▶ **Watch Video Solution**

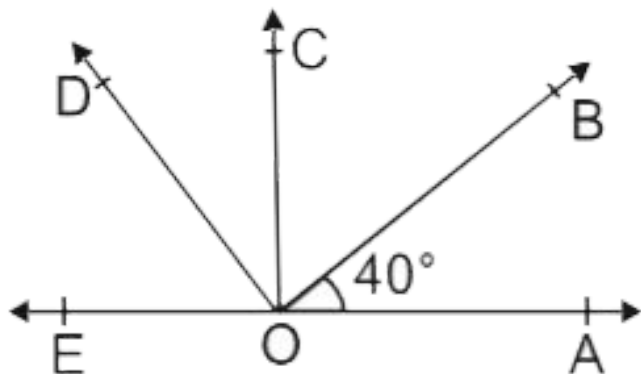**10.** As shown in the figure find x & y if $\angle ACB = 100°$, $\angle ADE = 120°$

11. In the given figure $\angle DOB = 85°$, $\angle COA = 85°$, $\angle BOA = 40°$,

find $\angle COB$ and $\angle DOC$.

> ▶ **Watch Video Solution**

12. Prove that the bisectors of the angles of a

linear pair are at right angle.

> ▶ **Watch Video Solution**

13. Two complementary angles are such that twice the measure of the one is equal to three times the measure of the other. The largest of the two measures

▶ Watch Video Solution

14. Prove that the sum of the three exterior angles of a triangle, formed by producing the sides in order, is 4 right angles.

▶ Watch Video Solution

15. If the bisectors of $\angle Q$ and $\angle R$ of a triangle $\triangle PQR$ meet at point S, then prove that $\angle QSR = 90° + \dfrac{1}{2}\angle P$

16. Show that if sum of the two angles of a triangle is equal to the third angle then the triangle is right angled triangle.

Part D

1. If two parallel lines are intersected by a transversal, prove that the bisectors of the interior angles on the same side of transversal intersect each other at right angles.

2. In Figure, $PQ\ AND\ RS$ are two mirrors placed parallel to each other. An incident ray AB strikes the mirror PQ at B, the reflected ray moves along the path BC and strikes the mirror
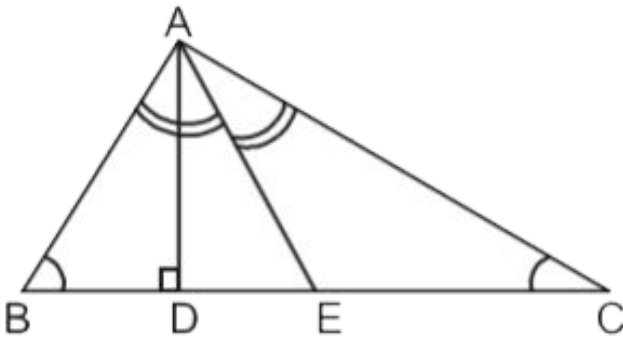
RS and C and again reflects back along CD.

Prove that $AB \mid \mid CD$.

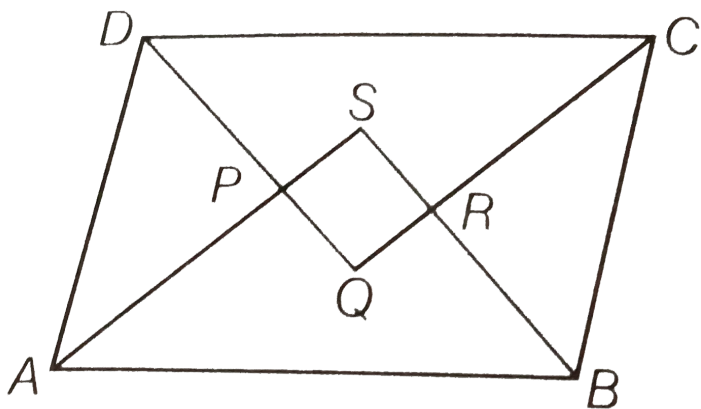**3.** In the figure AE is the bisector of $\angle A$, $AD \perp BC$. Show that

$$2(\angle ADE - \angle EAC) = \angle B + \angle C$$

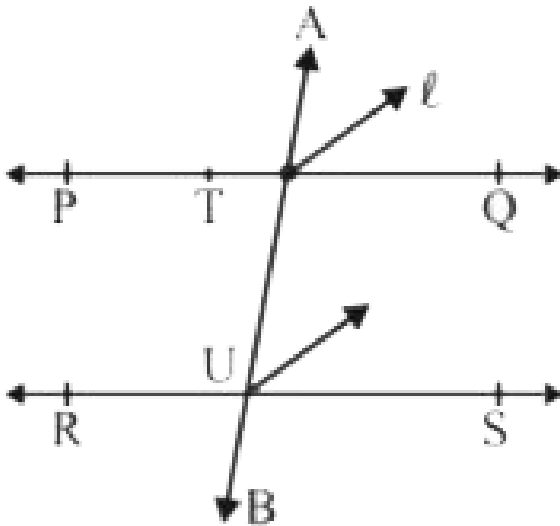**4.** Prove that the quadrilateral formed by the bisectors of the angles of a parallelogram is a rectangle.

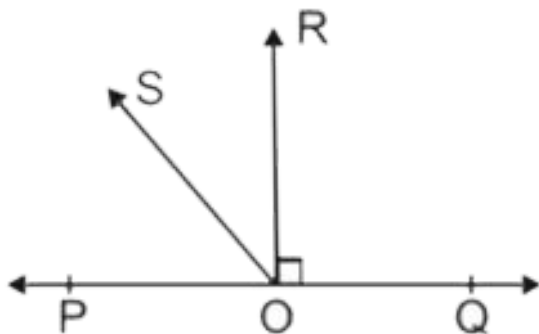**5.** In the given figure l||m where l and m are the bisectors of corresponding angles $\angle ATQ$ and $\angle TUS$ respectively Prove that PQ||RS.
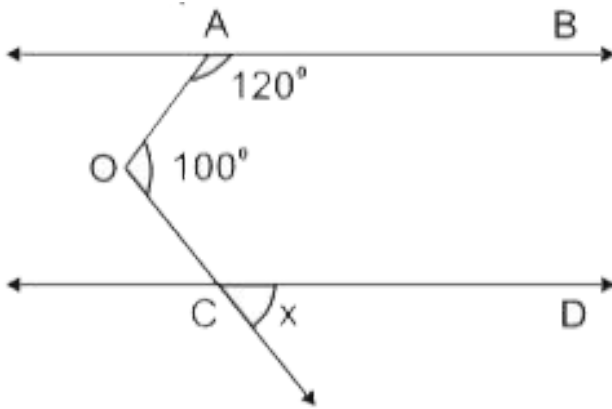

▶ **Watch Video Solution**

6. POQ is a straight line $RO \perp PQ$, SO is a ray

from   O   then   prove   that

$$\angle ROS = \frac{1}{2}(\angle QOS - \angle POS)$$

7. If AB||CD find x

8. In $\triangle PQR$, sides PQ and PR are extended to S and T respectively . OQ and OR are bisector of $\angle RQS$ and $\angle QRT$ meeting at O. Show that

$$2\angle QOR = \angle PQR + \angle QRP$$

Practice Test

1. If $\angle ABC = 142°$, find reflex $\angle ABC$.

2. One of the angles forming a linear pair is an acute angle. What kind of angle is the other?

3. Find x in the given figure :

4. If two parallel lines intersected by a transversal , then name the pair of angles formed that are equal .
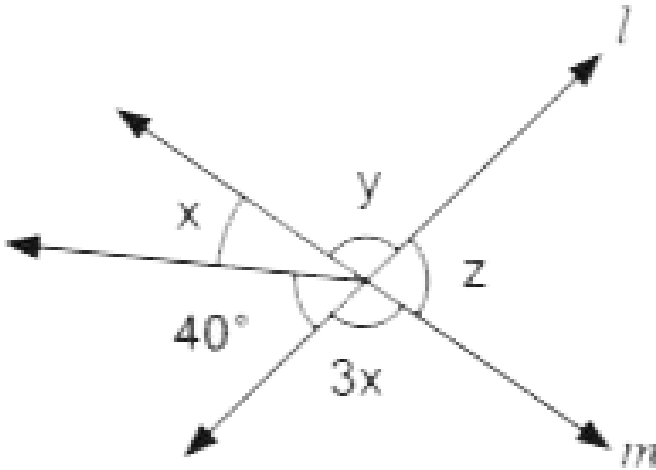
5. In a

$\Delta ABC, \angle A + \angle B = 125° \ \text{and} \ \angle B + \angle C = 150°$

. Find all the angle of $\triangle ABC$.

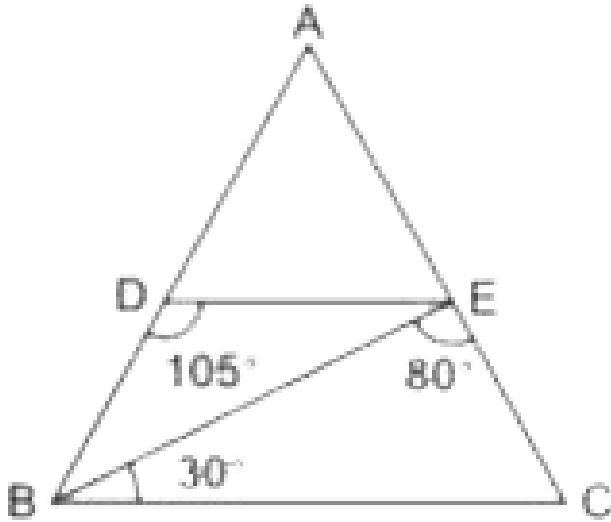**6.** I and m are the intersecting lines in the given figure . Find x , y and z .

7. If two parallel lines are intersected by a transversal, prove that the bisectors of the two pairs of interior angles enclose a rectangle.

▶ Watch Video Solution

8. ABC is a triagle in which DE||BC. Find $\angle A$.