

Lines and Angles

<1M>

1.If two supplementary angles are in the ratio 2:7, then the angles are

- (A) 40° , 140°
- (B) 85° , 95°
- (C) 40° , 50°
- (D) 60° , 120° .

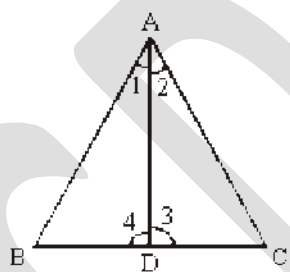
2.Supplementary angle of 103.5° is

- (A) 70.5°
- (B) 76.5°
- (C) 70°
- (D) 72.5°

3.Measure of an obtuse angle is

- (A) $> 0^\circ$, $< 90^\circ$
- (B) $> 90^\circ$, $< 180^\circ$
- (C) $> 0^\circ$, $< 270^\circ$
- (D) $> 0^\circ$, $< 180^\circ$

4.In the figure, AD is the bisector of $\angle A$ in $\triangle ABC$ then



- (A) $AB > BD$
- (B) $AC < AB$
- (C) $BC = AD$
- (D) None.

5.If two lines are parallel to same line then these line will be _____ to each other.

6.

If two parallel lines are intersected by a transversal, then bisectors of any two corresponding angles

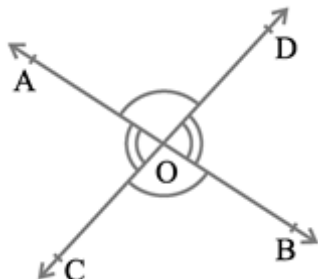
7.If a ray stands on a line, and then the sum of the adjacent angles so formed is _____

8.Two adjacent angles are said to form a linear pair of angles, if their non-common arms are

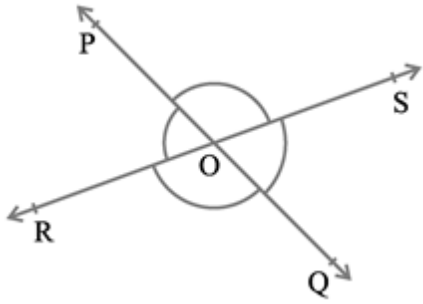
9.The measure of an angle is twice the measure of its supplementary angle. Find its measure.

10.Two supplementary angles are in the ratio 4:5. Find the angles.

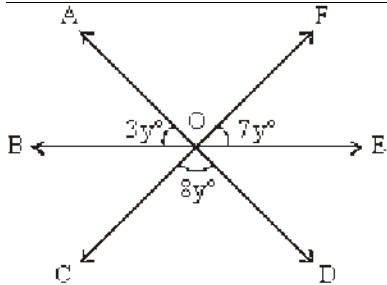
11.Find out the two pairs of adjacent angles



12.In Fig, lines PQ and RS intersect each other at point O. If $\angle POR : \angle ROQ = 2 : 3$, find angle POR and angle ROQ (1 Marks)



13. From the adjoining figure, the value of y is



- (A) 35°
- (B) 37°
- (C) 39°
- (D) 10°

14. The interior and boundary of a triangle is called

- (A) exterior.
- (B) interior.
- (C) triangular region.
- (D) plane.

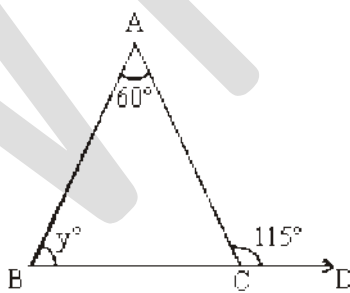
15. Which of the following pair is complementary?

- (A) $37^\circ, 45^\circ$
- (B) $38^\circ, 54^\circ$
- (C) $55^\circ, 35^\circ$
- (D) $74^\circ, 25^\circ$

16. The value of internal and the external bisectors of linear pair angle is

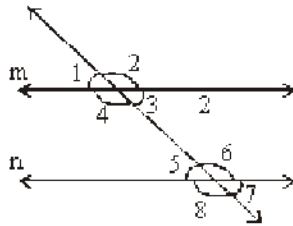
- (A) 90°
- (B) 45°
- (C) 360°
- (D) 270°

17. Measure of $\angle y$ is



- (A) 70°
- (B) 65°
- (C) 90°
- (D) 55°

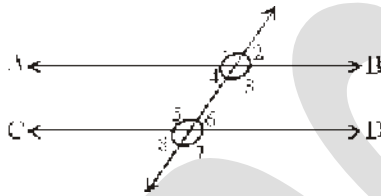
18. From the adjoining figure, if $\angle 1 = 55^\circ$ and $\angle 6 = 60^\circ$, then the lines m and n are



- (A) parallel
- (B) not parallel
- (C) can't say
- (D) Perpendicular.

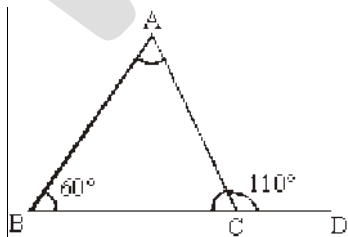
19. Sum of all angles round a point is equal to _____

20. In the adjoining figure $AB \parallel CD$, $\angle 1 : \angle 2 = 3 : 2$. Then $\angle 6$ is

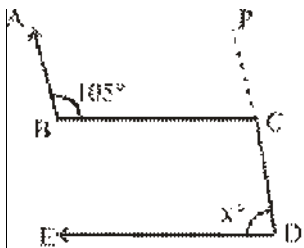


- (A) 72°
 - (B) 35°
 - (C) 45°
 - (D) 190°
21. All linear pairs are
- (A) supplementary
 - (B) complementary
 - (C) right angles
 - (D) none
22. If one of the linear pair is acute, then the measure of the other angle is
- (A) supplementary
 - (B) obtuse
 - (C) complementary
 - (D) none
23. The common end point of an angle is called
- (A) vertex.
 - (B) zero.
 - (C) end point.
 - (D) all of the above.

24. An exterior angle of a triangle is 110° and one of the interior of opposite angles is 60° . Then the other two angles of a triangle are

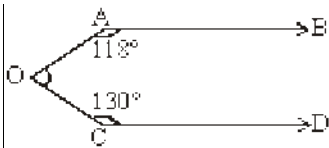


- (A) $70^\circ, 50^\circ$
 - (B) $70^\circ, 40^\circ$
 - (C) $110^\circ, 40^\circ$
 - (D) $110^\circ, 75^\circ$
25. From the adjoining figure the value of x is



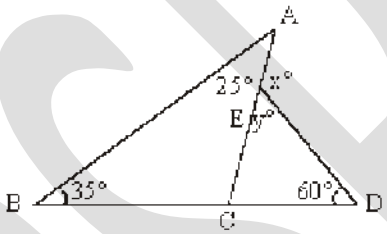
- (A) 75°
- (B) 90°
- (C) 85°
- (D) None of these .

26.In the adjoining figure, it is given that $AB \parallel CD$. $\angle AOC =$ _____



- (A) 120°
- (B) 72°
- (C) 112°
- (D) 150°

27.From the adjoining figure the value of x is



- (A) 106°
- (B) 180°
- (C) 120°
- (D) none

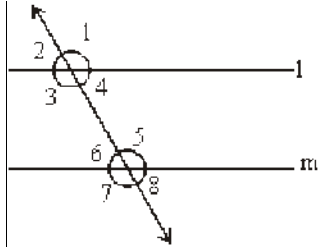
28.If B lies between A and C where $AC = 17$ cm and $BC = 9$ cm, then AB^2 is

- (A) 306
- (B) 144
- (C) 64
- (D) 24

29.The difference of two complimentary angles is 40° . Then the angles are

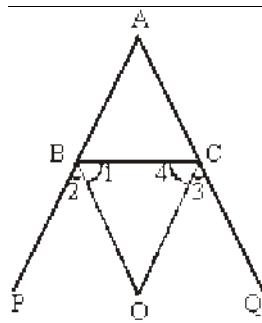
- (A) $65^\circ, 25^\circ$
- (B) $70^\circ, 30^\circ$
- (C) $70^\circ, 45^\circ$
- (D) $60^\circ, 30^\circ$

30.In the given figure the corresponding angles are



- (A) $\angle 1$ & $\angle 5$
- (B) $\angle 2$ & $\angle 6$
- (C) $\angle 3$ & $\angle 7$
- (D) All of the above

31.In the adjoining figure BO, CO are angle bisectors of external angles of $\triangle ABC$. Then $\angle BOC$ is



(A) $\frac{90^\circ - \frac{1}{2}\angle A}{2}$

(B) $\frac{90^\circ + \frac{1}{2}\angle A}{2}$

(C) $\frac{180^\circ - \frac{1}{2}\angle A}{2}$

(D) None of these.

32.If the arms of one angle are respectively parallel to the arms of another angle, then the two angles are:

(A) Neither equal nor supplementary

(B) Not equal but supplementary

(C) Equal but not supplementary

(D) Either equal or supplementary

33.A, B, C and D are four non-coplanar points. The number of planes that can be drawn passing through any three of these points, is:

(A) 3

(B) 4

(C) 5

(D) 8

34.How many degrees are there in an angle which equals one-fifth of its supplement?

(A) 15°

(B) 30°

(C) 75°

(D) 150°

35.If lines AB, AC, AD and AE are parallel to a line l, then

(A) A, B, C, D, E are collinear points.

(B) A, B, C, D, E are non collinear points.

(C) AB & AC are parallel and AD & AE are perpendicular.

(D) none of these.

36.If two lines are parallel ,then the perpendicular distance between them is

(A) decreasing.

(B) increasing.

(C) constant.

(D) none.

37.Supplementary and complementary angles need not be

(A) equal to 180° , 90°

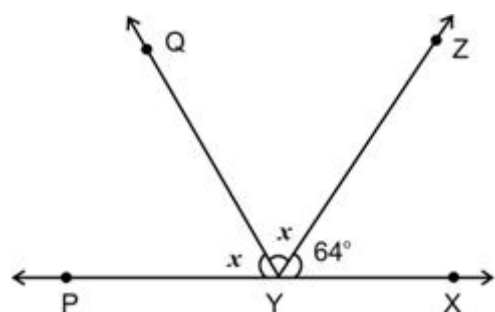
(B) adjacent

(C) angles

(D) none.

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38.It is given that $\angle XYZ = 64^\circ$ and is produced to a point P. Draw a figure from the given information. If ray YQ bisect $\angle ZYP$, find $\angle XYQ$ and reflex $\angle QYP$.



39.

Match the following:

- a) Adjacent angles
- b) Vertically opposite angles
- c) Linear pair of angles

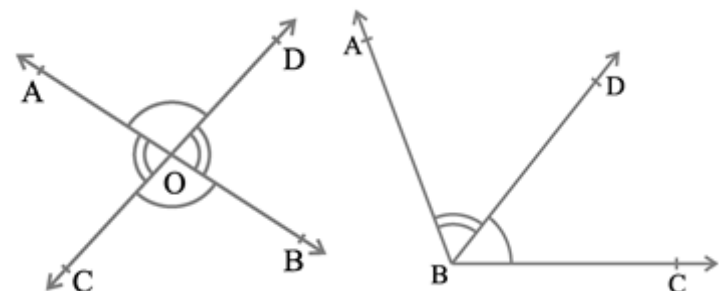


Fig-1 Fig-2

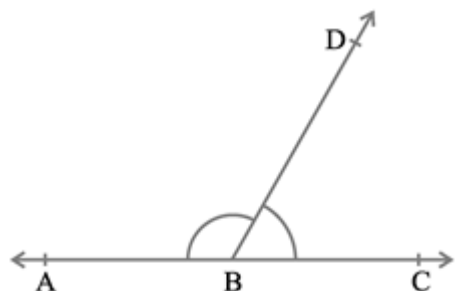
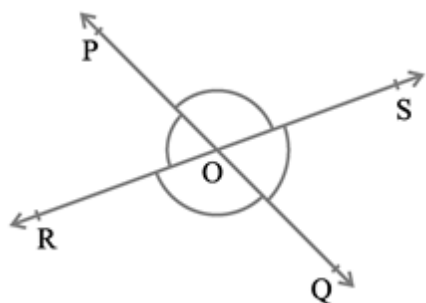
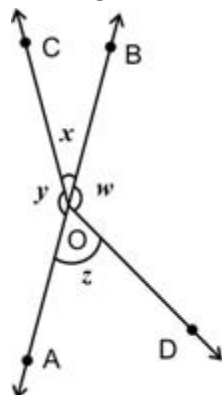


Fig-3

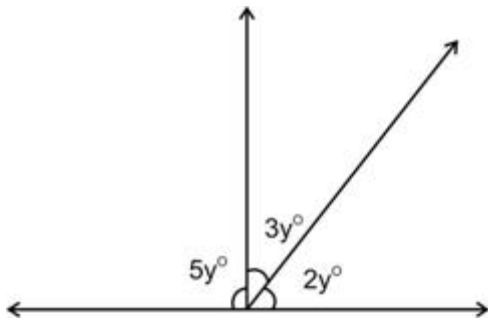
40. In Fig, lines PQ and RS intersect each other at point O. If $\angle POR : \angle ROQ = 5 : 7$, find all the angles.



41. In figure if $x + y = w + z$, then prove that AOB is a line.

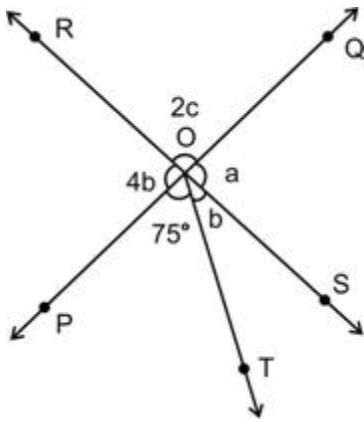


42. In the figure, find the value of y .

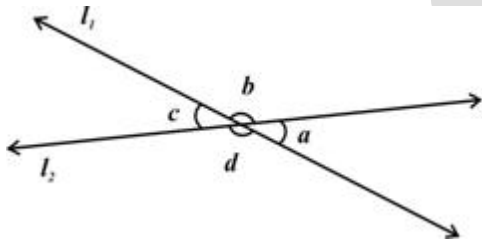


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43. In Figure two straight lines PQ and RS intersect each other at O . If $\angle POT = 75^\circ$, find the values of a, b and c

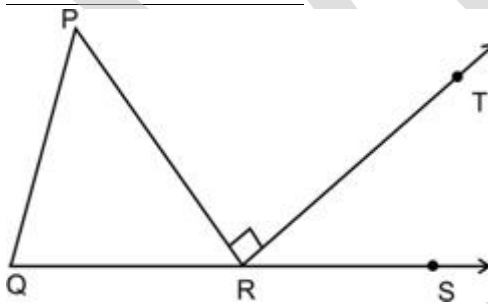


44. In figure, lines l_1 and l_2 intersect at O forming angles as shown in the figure. If $a = 35^\circ$ Find the value of b, c and d .



45. If the angles of a triangle are in the ratio $2:3:4$, find the three angles.

46. In the figure, side QR of $\triangle PQR$ has been produced to S , if $\angle P : \angle Q : \angle R = 3 : 2 : 1$ and $RT \perp PR$, Find $\angle TRS$



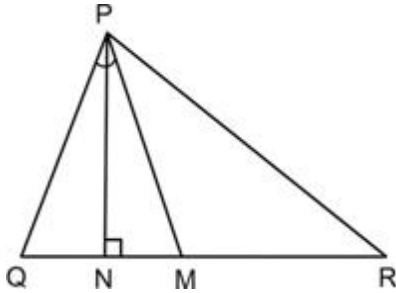
47. In Figure determine the value of y

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48. In the given figure $\angle Q > \angle R$ and M is a point QR such that PM is the bisector of angle P . If the

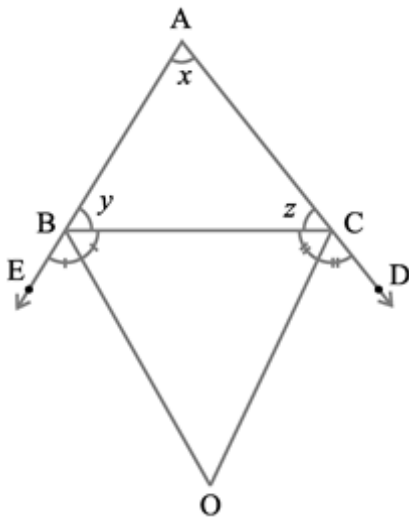
$$\angle MPN = \frac{1}{2}(\angle Q - \angle R)$$

perpendicular from P on QR meets QR at N , then prove that

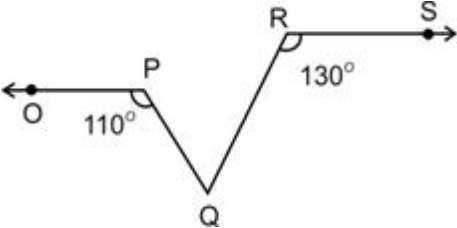


49. In figure the sides AB and AC of $\triangle ABC$ are produced to points E and D respectively. If bisectors BO and CO of $\angle CBE$ and $\angle BCD$ respectively meet at point O , then prove that.

$$\angle BOC = 90^\circ - \frac{1}{2} \angle BAC$$



50. In Figure $OP \parallel RS$. Determine $\angle PQR$



51. ABCDE is a regular pentagon and bisector of $\angle BAE$ meets CD in M. If bisector of $\angle BCD$ meets AM at P find $\angle CPM$