LINES AND ANGLES ASSIGNMENT -1

CLASS - 9

Q.1 Two adjacent angles on a straight line are in the ratio 6 : 3. The measure of the greater angle is :
(a) 120° (b) 180° (c) 90° (d) 110°

Q.2 If one of the four angles formed by two intersecting lines is a right angle, then each of the four angles is :
(a) an acute angle (b) a right angle (c) an obtuse angle (d) none of these

Q.3 One-third of an angle is equal to its supplement. The measure of this angle is :
(a) 45° (b) 60° (c) 75° (d) 135°

Q.4 If all the three sides of a triangle are produced, then the sum of three exterior angles so formed is equal to :
(a) 180° (b) 360° (c) 540° (d) 270°

Q.5 50% of an angle is the supplement of 110°. The value of the angle is :
(a) 35° (b) 125° (c) 109° (d) 140°

Q.6 The sum of two angles of a triangle is equal to its third angle. Determine the measure of the third angle.

Q.7 Find the angle whose supplement is four times of its complement.

Q.8 Find the measure of an angle, if seven times its complement is 10° less than three times its supplement.

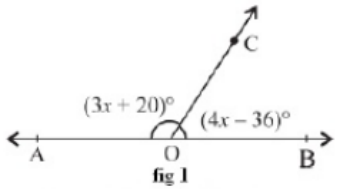


fig 1

Q.9 In the figure 1, what value of x will make AOB, a straight line.

Q.10 Two adjacent angles on a straight line are in the ratio of 5 : 4. Find the measure of each angle.

Q.11 In the fig 2 AB‖CD. Prove that $p + q - r = 180$.

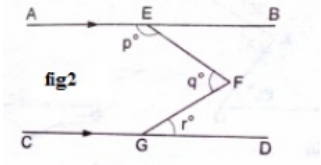


fig2

Q.12 If two lines are perpendicular to the same line, prove that they are parallel to each other.

Q.13 In triangle ABC, if $2\angle A = 3\angle B = 6\angle C$. calculate the measure of all three angles.

Q.14 In triangle ABC, if $\angle A - \angle B = 33°$ and $\angle B - \angle C = 18°$. Calculate the measure of all three angles.

Q.15 A triangle ABC is right angled at A. L is a point on BC such that AL ⊥ BC. Prove that $\angle BAL = \angle ACB$.

Q.16 The angles of a triangle are in the ratio of 2 : 3 : 7. Find the measure of each angle of the triangle.

Q.17 The side BC of ΔABC is produced to D. The bisector of ∠A meets BC in L. prove that $\angle ABC + \angle ACD = 2\angle ALC$ (fig 3)

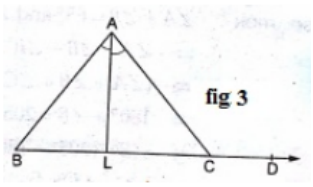
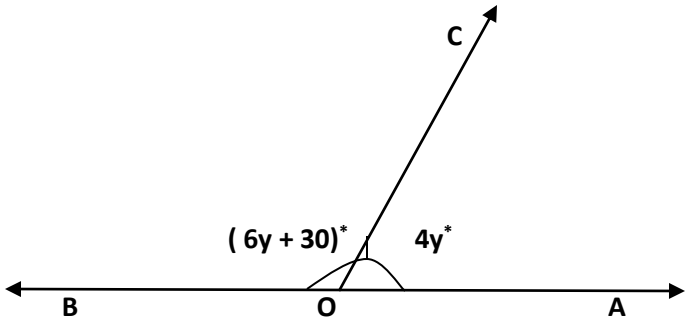


fig 3

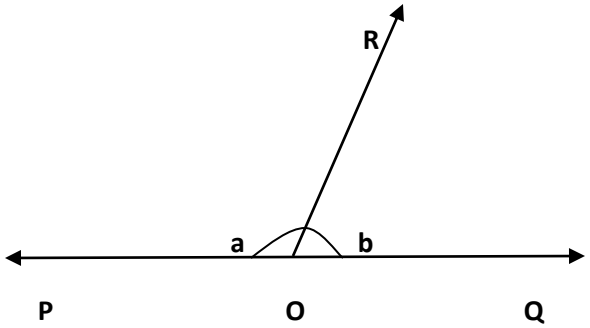
Q.18 Lines PQ and RS intersect each other at point O. If ∠POR : ∠ROQ = 5 : 7, find all the remaining angles.

Q19. State and prove Angle sum property of a triangle . Using this result , find the value of p and all the three angles of a triangle , if the angles are (3x -2)* , (2x +11)* and (5x – 9)* .

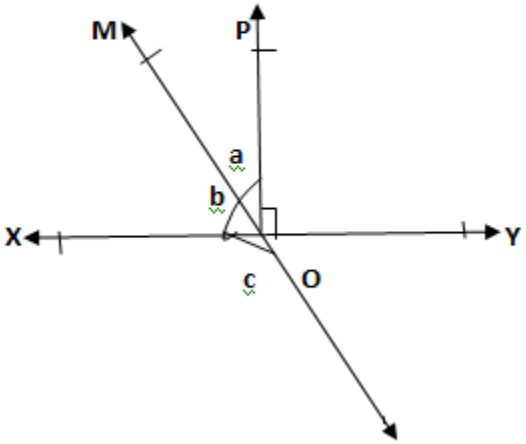
Q20. What value of y would make AOB a line in the given figure if Angle AOC = 4 y and Angle BOC = (6y + 30)*



Q21. In the given figure Angle POR and Angle QOR form a linear pair , if a-b = 80 , find the values of a and b.

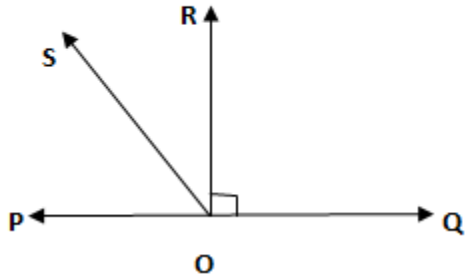


. In the given figure lines XY and MN intersect at O . If ∠POY = 90° and a : b = 2 : 3 , find c.



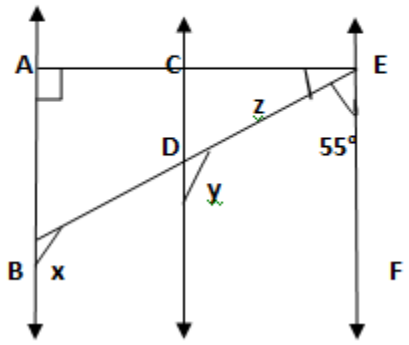
Q23

In the given figure POQ is a line. Ray OR is perpendicular to line PQ. OS is another ray lying between rays OP and OR. Prove that angle ROS = $\frac{1}{2}$ (∠QOS -- ∠PO S)



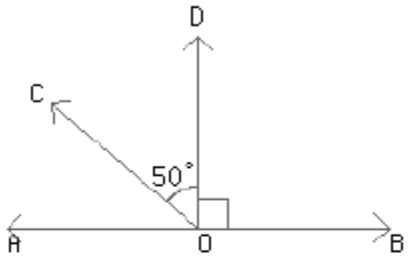
Q24

In the given figure AB II CD and CD II EF. Also EA is perpendicular to AB . If ∠ BEF = 55 °. Find the values of x , y and z.

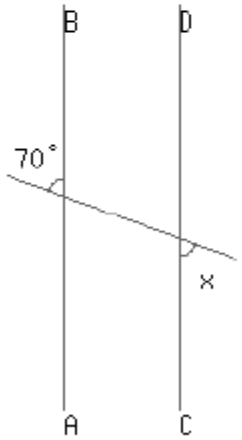


Q25. FILL IN THE BLANKS.

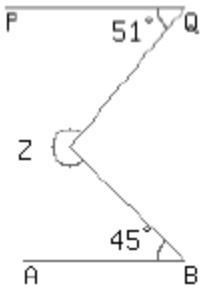
If OD is perpendicular to AB, and ∠DOC = 50°, (∠BOC - ∠AOC). = _____ °.



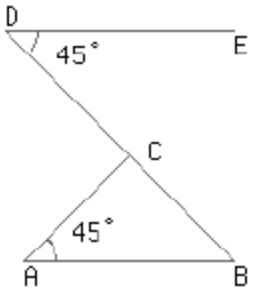
If AB and CD are parallel, value of angle x is _____ °.



If AB and PQ are parallel, Value of angle Z is _____ °



) If AB and DE are parallel, find the value of ∠ACB



NOTE : DO PRACTICE ALL THE QUESTIONS FROM NCERT BOOK AND EXAMPLER