KD EDUCATION ACADEMY [9582701166]

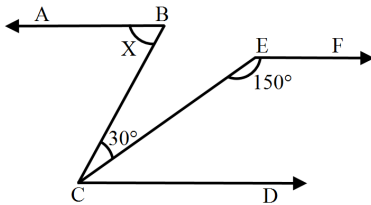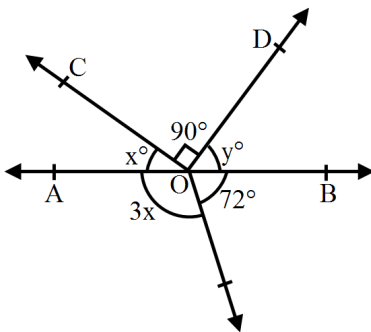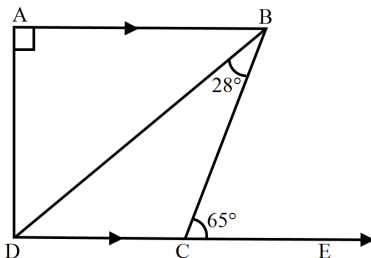* **Choose the right answer from the given options. [1 Marks Each]** [80]

1. In the adjoining figure, AB || CD and AB || EF. The value of x is:

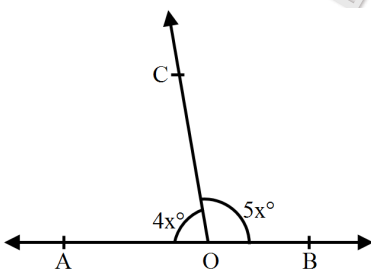   (A) 50º   (B) 70º   (C) 40º   (D) 60º
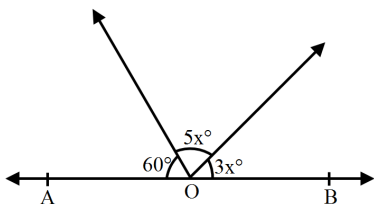
2. In the adjoining figure, y =?

   (A) 36º   (B) 63º   (C) 72º   (D) 54º

3. In the given figure, AB || DC, $\angle BAD = 90°$, $\angle CBD = 28°$ and $\angle BCE = 65°$. Then $\angle ABD =$?

   (A) 32º   (B) 37º   (C) 43º   (D) 53º

4. In the given figure, AOB is a straight line. If $\angle AOC = 4x°$ and $\angle BOC = 5x°$ then $\angle AOC =$?
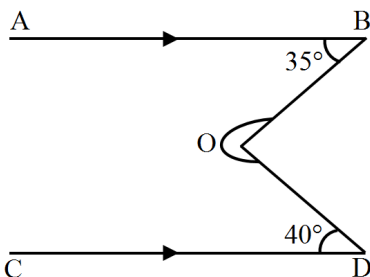

   (A) 100º   (B) 40º   (C) 80º   (D) 60º

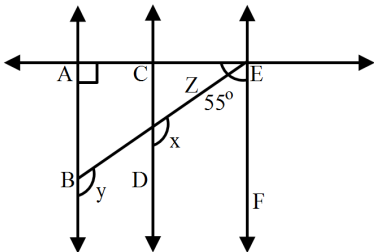5. In the given figure, AOB is a straight line. The value of x is:

(A) 15   (B) 20   (C) 25   (D) 12

6. In the given figure, AB || CD and O is a point joined with B and D, as shown in the figure such that $ABO = 35°$ and $\angle CDO = 40°$ Reflex $\angle BOD =$?

(A) 265º   (B) 285º   (C) 275º   (D) 255º

7. In the adjoining figure, AB || CD and AB || EF. If EA $\perp$ BA and $\angle BEF$ then the values of x, y and z:-

(A) 125º, 125º, 35º   (B) 60º, 60º, 60º   (C) 120º, 130º, 25º   (D) 35º, 125º, 120º
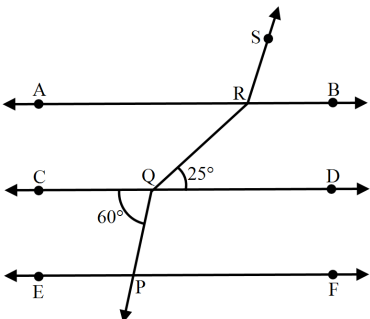
8. Given $\angle POR = 3x$ and $\angle QOR = 2x + 10°$. If $\angle POQ$ is a straight line, then the value of x is:

(A) 30º   (B) 36º   (C) 34º   (D) None of these

9. The angles of a triangle are in the ratio 2 : 3 : 4. The largest angle of the triangle is:

(A) 120º   (B) 100º   (C) 80º   (D) 60º

10. In a given figure, if AB || CD || EF, PQ || RS, $\angle RQD = 25°$ and $\angle CQP = 60°$, then $\angle QRS$ is equal to:
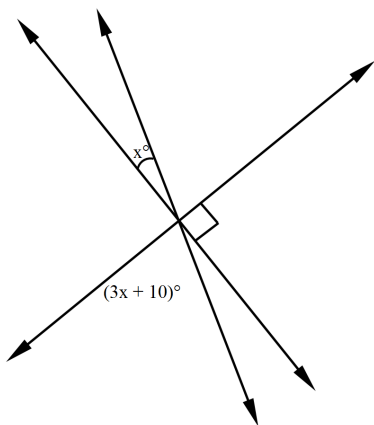

(A) 145º   (B) 110º   (C) 85º   (D) 135º

11. Two straight lines AB and CD cut each other at O. If $\angle BOD = 63°$, then $\angle BOC =$

(A) 63°   (B) 117°   (C) 17°   (D) 153°
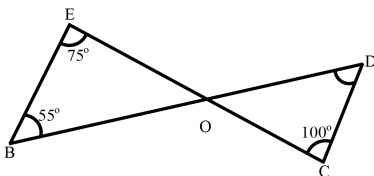
12. In Fig., the value of x is:

(A) 15º   (B) 12º   (C) 8º   (D) 20º

13. An angle is one fifth of its supplement. The measure of the angle is:

(A) 15º   (B) 30º   (C) 75º   (D) 150º

14. In the given figure, $\angle OEB = 75°, \angle OBE = 55°$ and $\angle OCD = 100°$. Then $\angle ODC =?$
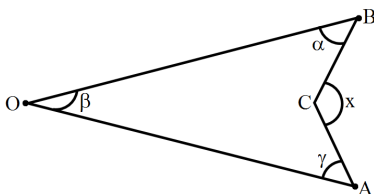

(A) 30º   (B) 25º   (C) 35º   (D) 20º

15. Write the correct answer in the following:

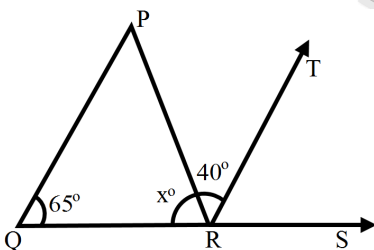The angles of a triangle are in the ratio 5 : 3 : 7 The triangle is.

(A) An acute angled triangle.   (B) An obtuse angled triangle.   (C) A right triangle.   (D) An isosceles triangle.
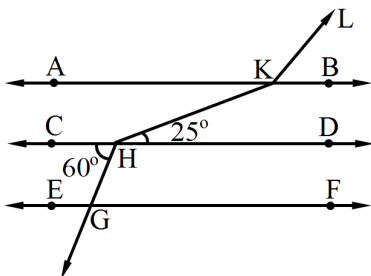
16. In the given x =?

(A) $\alpha - \beta - \gamma$ (B) $\alpha + \beta + \gamma$ (C) $\alpha + \beta - \gamma$ (D) $\alpha + \gamma - \beta$

17. In the adjoining figure, if QP || RT, then x is equal to:

(A) 55º   (B) 75º   (C) 65º   (D) 70º

18. In Fig. AB || CD || EF and GH || KL. The measure of $\angle HKL$ is:
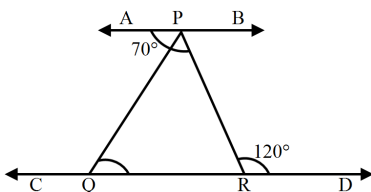
(A) 85º (B) 135º (C) 215º (D) 145º

19. If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 5 : 4, then the smaller of the two angles is:

(A) 120º (B) 60º (C) 80º (D) 100º

20. The angles of a triangle in ascending order are x, y, z and y - x = z - y = 10º. The smallest angles is:

(A) 60º (B) 50º (C) 70º (D) 40º

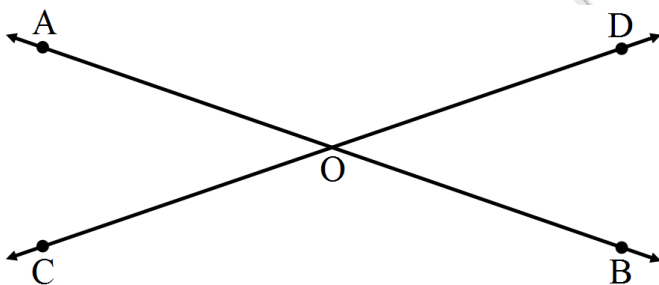21. In the given figure, AB || CD, If $\angle APQ = 70°$ and $\angle PRD = 120°$, then $\angle QPR =$?

(A) 35º (B) 40º (C) 60º (D) 50º

22. A, B, C are the three angles of a triangle. If A - B = 15º and B - C = 30º, then angles A, B, C are respectively:

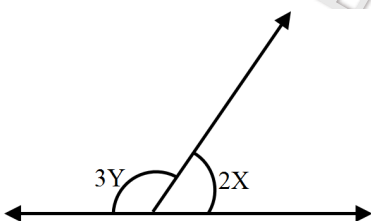(A) 80º, 65º, 35º (B) 65º, 80º, 35º (C) 80º, 35º, 65º (D) 35º, 65º, 80º

23. In the given figure, straight lines AB and CD intersect at O. If $\angle AOC + \angle BOD = 130°$ then $\angle AOD =$?
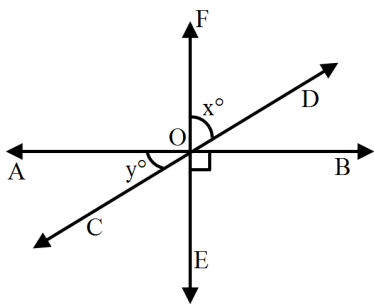

(A) 65º (B) 115º (C) 110º (D) 125°

24. In the given figure x = 30º, the value of Y is:

(A) 36º (B) 10º (C) 40º (D) 45º

25. In the adjoining figure, the three lines AB, CD and EF all pass through the point O. If $\angle EOB = 90°$ and x : y = 2 : 1 then $\angle BOD$ and $\angle COE$:
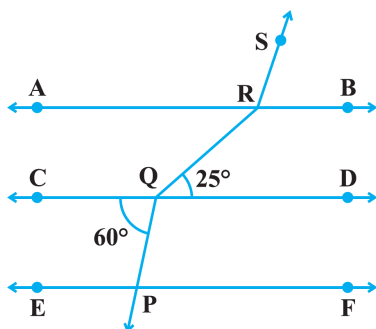
(A) 30º, 60º   (B) 80º, 20º   (C) 45º, 45º   (D) 60º, 60º

26. The measure of an angle is five times its comlement. The angle measure.

(A) 25º   (B) 35º   (C) 65º   (D) 75º
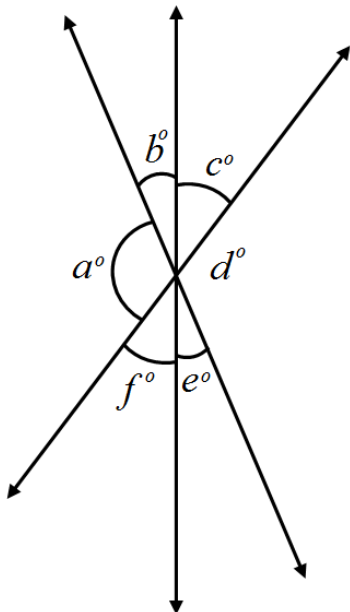
27. Write the correct answer in the following:

In Fig. if $AB\|CD\|EF, PQ\|RS, \angle RQD = 25°$ and $\angle CQP = 60°$, then $\angle QRS$ is equal to.

(A) 85°   (B) 135°   (C) 145°   (D) 110°

28. In figure, which of the following statement must be true?
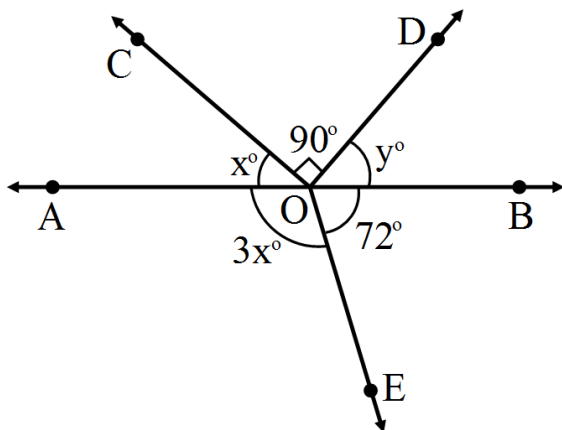(i) a + b = d + c (ii) a + c + e = 180° (iii) b + f = c + e

(A) (i) only   (B) (ii) only   (C) (iii) only   (D) (ii) and (iii) only

29. If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 2 : 3, then the greatest of two angles is:

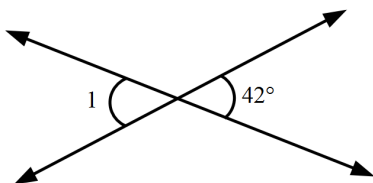(A) 36º   (B) 108º   (C) 72º   (D) 54º
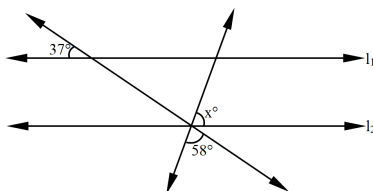
30.

In the adjoining figure, what is the value of y?

(A) 36   (B) 54   (C) 63   (D) 72

31. In the given figure, the measure of $\angle 1$ is:

(A) 48º   (B) 42º   (C) 138º   (D) 158º

32. In Fig. if l1 || l2, what is the value of x?

(A) 85º   (B) 90º   (C) 70º   (D) 75º

33. If one of the angles of a triangle is 130º then the angle between the bisectors of the other two angles can be:

(A) 50º   (B) 65º   (C) 90º   (D) 155º

34. Which of the following pairs of angles are complementary?

(A) 25º, 65º   (B) 32.1º, 47.9º   (C) 70º, 110º   (D) 30º, 70º
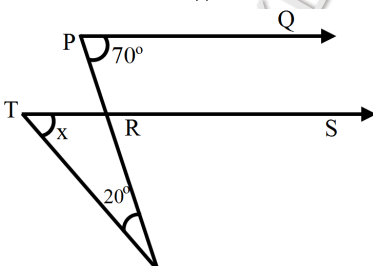
35. The angles of a triangle are in the ratio 2 : 3 : 4. The largest angle of the triangle is:

(A) 60º   (B) 100º   (C) 12º   (D) 80º
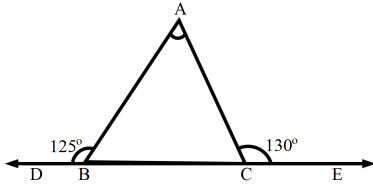
36. Each angle of an equilateral triangle is:

(A) 45º   (B) 30º   (C) 60º   (D) 90º

37. In figure, $PQ \| RS, \angle QPR = 70°, \angle ROT = 20°$ find the value of x.
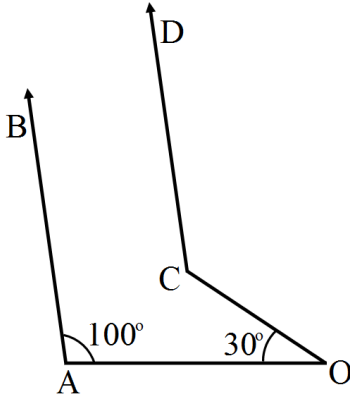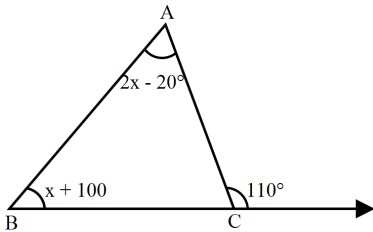

(A) 20º   (B) 70º   (C) 50º   (D) 110º

38. Side BC of $\triangle ABC$ has been produced to Don left-hand side and to Eon right-hand side such that $\angle ABD = 125°$ and $\angle ACE = 130°$ then $\angle A =?$

    (A) 55°   (B) 50°   (C) 75°   (D) 65°

39. In the given figure, AB || CD. If $\angle AOC = 30°$ and $\angle OAB = 100°$ then $\angle OCD =?$

    (A) 130º   (B) 150º   (C) 80º   (D) 100º

40. In the below figure, the value of x is:

    (A) 30º   (B) 10º   (C) 15º   (D) 25º

41. In Fig. if $\frac{y}{x} = 5$ and $\frac{z}{x} = 4$, then the value of x is:

    (A) 15º   (B) 18º   (C) 12º   (D) 8º
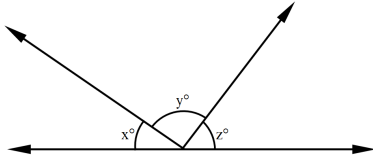
42. In figure, if l || m, then x =

(A) 105°   (B) 65°   (C) 40°   (D) 25°
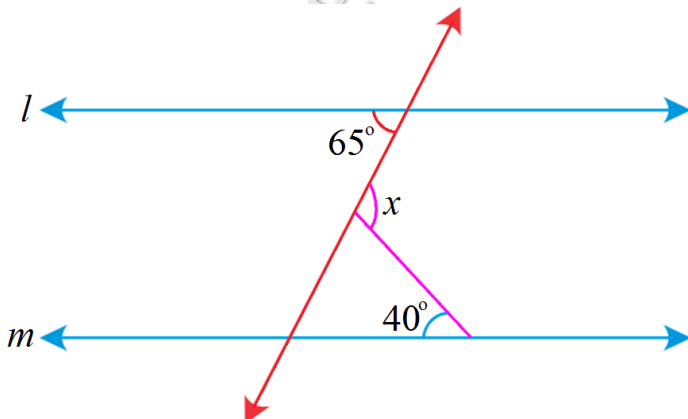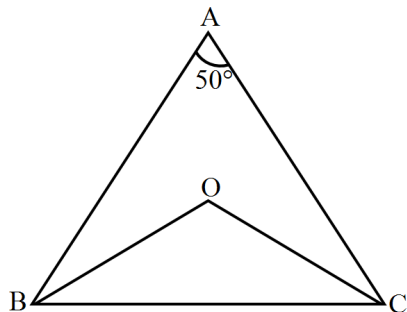
43.   Two complementary angles are such that twice the measure of the one is equal to three times the measure of the other. The larger of the two measures.
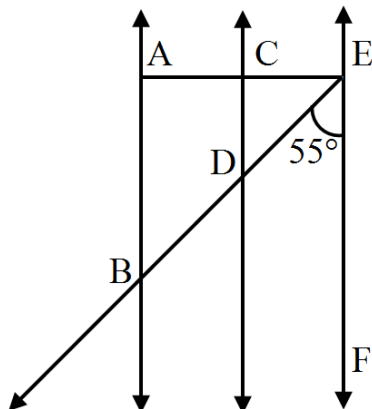
    (A) 72º   (B) 36º   (C) 54º   (D) 63º

44.   In the given figure, BO and CO are the bisectors of $\angle B$ and $\angle C$ respectively. If $A = 50°$, then $\angle BOC =$?
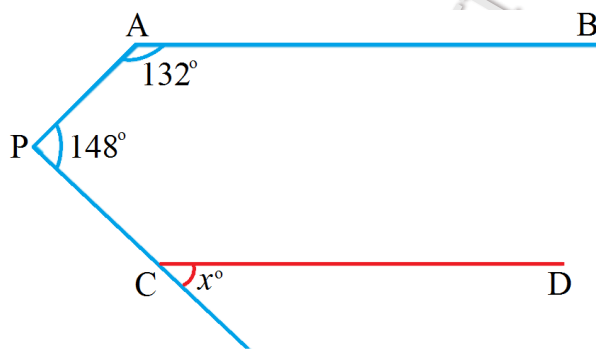

    (A) 130º   (B) 120º   (C) 100º   (D) 115º

45.   In the given figure, AB || CD || EF, $EA \perp AB$ and BDE is the transversal such that $\angle DEF = 55°$, Then $\angle AEB =$?

    (A) 35º   (B) 55º   (C) 45º   (D) 25º

46.   In figure, if AB || CD, then x =

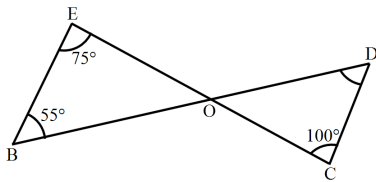   (A) 100   (B) 105   (C) 110   (D) 114

47.   An exterior angle of a triangle is 105º and its two interior opposite angles are equal. Each of these equal angles is:

    (A) $37\frac{1}{2}^{\circ}$ (B) $52\frac{1}{2}^{\circ}$ (C) 75° (D) $72\frac{1}{2}^{\circ}$

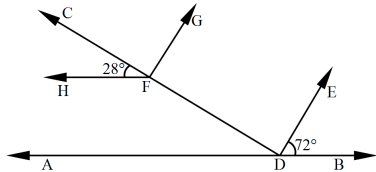48.   In the given figure, $\angle OEB = 75°$, $\angle OBE = 55°$ and $\angle OCD = 100°$. Then $\angle ODC =$?

(A) 25º   (B) 30º   (C) 35º   (D) 20º

49. The measurement of Complete angle is:

(A) 180º   (B) 0º   (C) 360º   (D) 90º

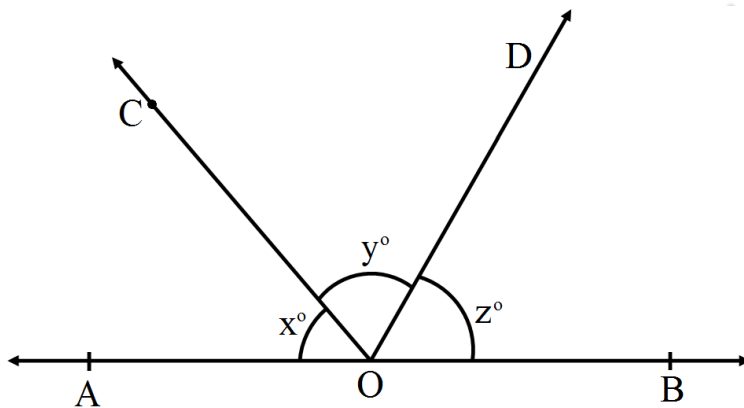50. In Fig. if AB || HF and DE || FG, then the measure of $\angle FDE$ is:

(A) 80º   (B) 90º   (C) 108º   (D) 100º

51. Two angles measure $(70 + 2x)º$ and $(3x - 15)º$. If each angle is the supplement of the other, then the value of x is:
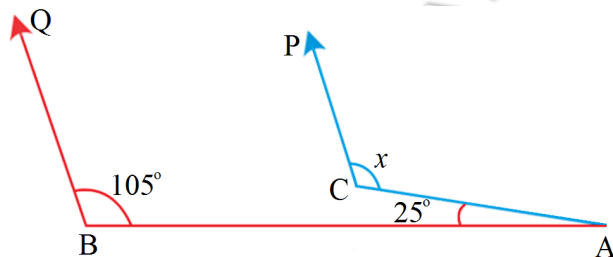
(A) 25   (B) 250º   (C) 30   (D) 20

52. In the adjoining figure, AOB is a straight line. If x : y : z = 4 : 5 : 6, then y =?

(A) 60º   (B) 80º   (C) 48º   (D) 72°

53. In figure, if CP || BQ, then the measure of x is:
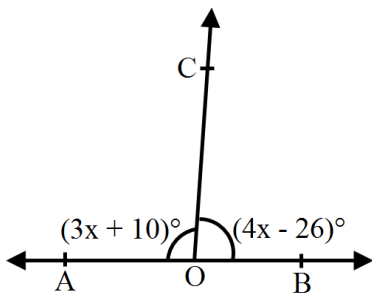

(A) 130°   (B) 105°   (C) 175°   (D) 125°

54. In two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 5 : 4, then the smaller of the two angles is:
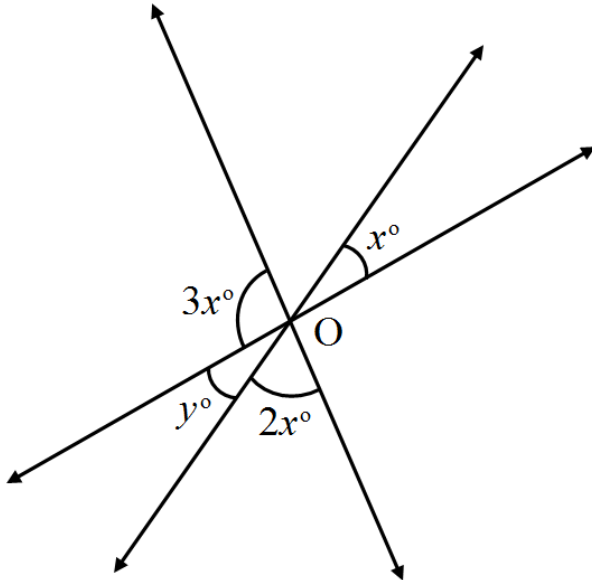
(A) 120º   (B) 60º   (C) 100º   (D) 80º

55. In the given figure, AOB is a straight line. If $\angle AOC = (3x + 10)°$ and $\angle BOC = (4x - 26)°$. then $\angle BOC =$?

(A) 76º   (B) 106º   (C) 96º   (D) 86º

56. In figure, the value of y is:

(A) 20°   (B) 30°   (C) 45°   (D) 60°

57. In the adjoining figure, the bisectors of $\angle CBD$ and $\angle BCE$ meet at the point O. If $\angle BAC = 70°$, then $\angle BOC$ is equal to:

(A) 35º   (B) 11º   (C) 55º   (D) 70º
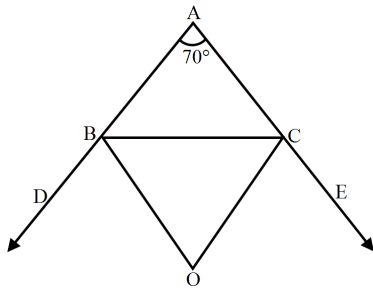
58. The difference between two complementary angles is 400. The angles are:

(A) 70º, 110º   (B) 65º, 35º   (C) 65º, 25º   (D) 70º, 30º

59. In figure, the value of x, is:

(A) 12   (B) 15   (C) 20   (D) 30

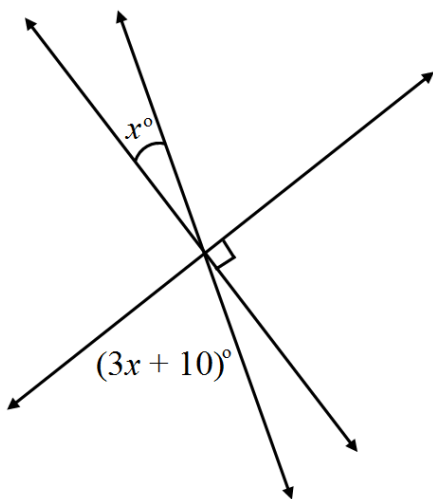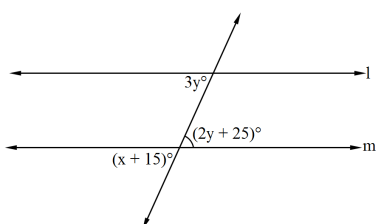60. In Fig. if l || m, what is the value of x?
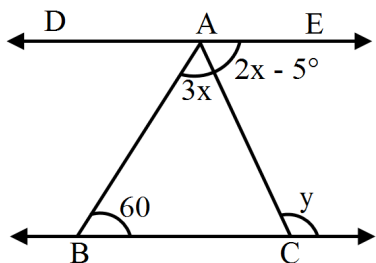

(A) 50   (B) 45   (C) 60   (D) 30

61. If two supplementary angles are in the ratio 2 : 7, then the angles are:
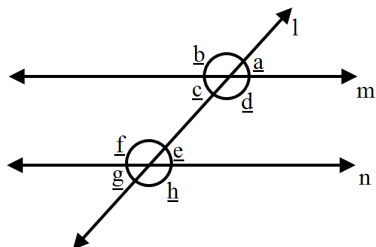
(A) 35º, 145º   (B) 70º, 110º   (C) 40º, 140º   (D) 50º, 130º

62. In the adjoining figure, if DE || BC, then the values of x and y are:

(A) x = 25º, y = 85º   (B) x = 25º, y = 135º   (C) x = 260, y =1380   (D) x = 20º, y = 120º

63. In the adjoining figure, m || n. If $\angle a : \angle b = 2 : 3$, then the measure of $\angle h$ is:

(A) 72º   (B) 108º   (C) 150º   (D) 120º
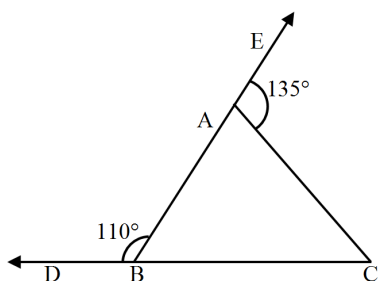
64. The angles of a triangle are in the ratio 5 : 3 : 7, the triangle is:

(A) An isosceles triangle.   (B) An acute angled triangle.   (C) An obtuse angled triangle.   (D) A right triangle.

65. In the given figure, sides CB and BA of $\triangle ABC$ have been produced to D and E respectively such that $\angle ABD = 110°$ and $CAE = 135°$. Then $\angle ACB =$?

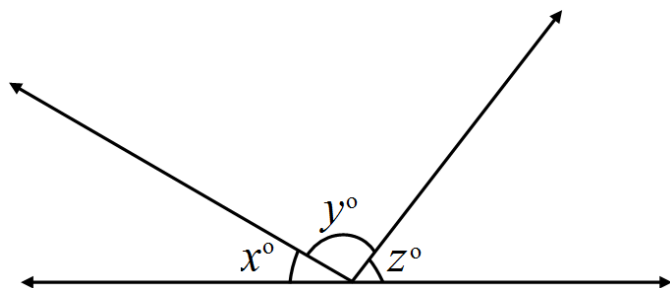(A) 45º   (B) 55º   (C) 35º   (D) 65º

66. In the given figure, AB || CD, CD || EF and y : z = 3 : 7, then x =?

(A) 108º   (B) 162º   (C) 126º   (D) 63º
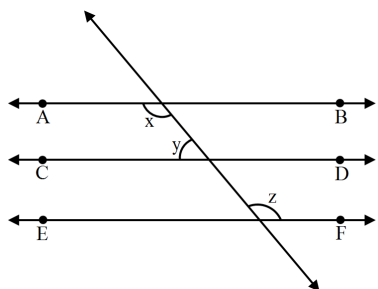
67. In figure, if $\frac{y}{x} = 5$ and $\frac{z}{x} = 4$, then the value of x is:

(A) 8°   (B) 18°   (C) 12°   (D) 15°

68. If two angles are supplementary and the larger is 20º less then three times the smaller, then the angles are:

(A) $72\frac{1}{2}^{\circ}, 17\frac{1}{2}^{\circ}$ (B) $140^{\circ}, 40^{\circ}$ (C) $62\frac{1}{2}^{\circ}, 27\frac{1}{2}^{\circ}$ (D) $130^{\circ}, 50^{\circ}$

69. In figure, AB and CD are parallel to each other. The value of x is:

(A) 90º   (B) 140º   (C) 100º   (D) 120º
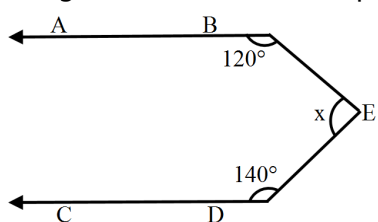
70. In the given figure, AB || CD. If $BAO = 60^{\circ}$ and $\angle OCD = 110^{\circ}$, then $\angle AOC =$?

(A) 40º   (B) 50º   (C) 60º   (D) 70º
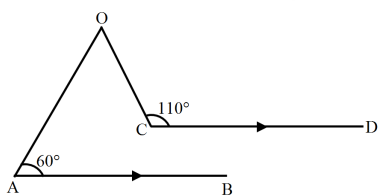
71.

In the given figure, AOB is a straight line. If $\angle AOC = (3x - 10)^\circ$, $\angle COD = 50^\circ$ and $\angle BOD = (x + 20)^\circ$ then $\angle AOC =$?

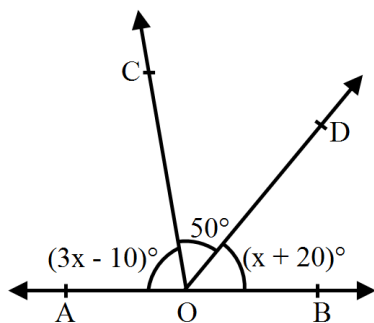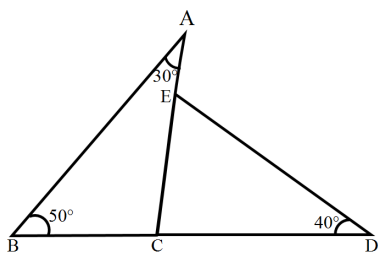
(A) 50º   (B) 60º   (C) 80º   (D) 40º

72. In the given figure, $\angle BAC = 30^\circ$, $\angle ABC = 50^\circ$ and $\angle CDE = 40^\circ$. Then $\angle AED =$?
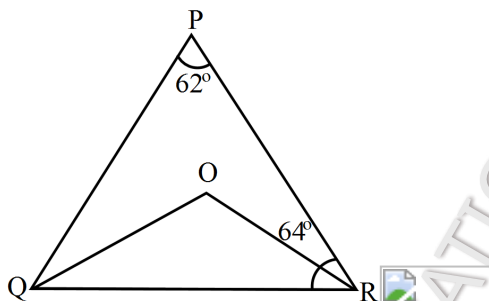

(A) 120º   (B) 110º   (C) 80º   (D) 100º

73. Two lines AB and CD intersect at O. If $\angle AOC + \angle COB + \angle BOD = 270^\circ$, then $\angle AOC =$

(A) 180º   (B) 70º   (C) 80º   (D) 90º

74. In the adjoining figure $\angle QPR = 62^\circ$ and $\angle PRQ = 64^\circ$ If OQ and OR and bisectors of $\angle PQR$ and $\angle PRQ$ respectively, then $\angle OQR$ and $\angle QOR$:

(A) 121º, 20º   (B) 27º, 121º   (C) 20º, 80º   (D) 26º, 124º

75. Given $\angle POR = 3x$ and $\angle QOR = 2x + 10^\circ$. If POQ is a straight line, then the value of x is:

(A) 30°   (B) 34°   (C) 36°   (D) None of these

76. If $\angle A = 4\angle B = 6\angle C$, then A : B : C?

(A) 6 : 4 : 3   (B) 12 : 3 : 2   (C) 2 : 3 : 4   (D) 3 : 4 : 6

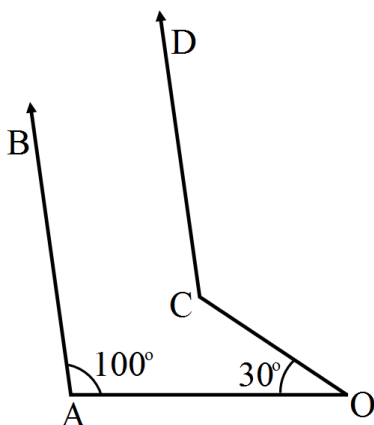77. In figure, if line segment AB is parallel to the line segment CD, what is the value of y?
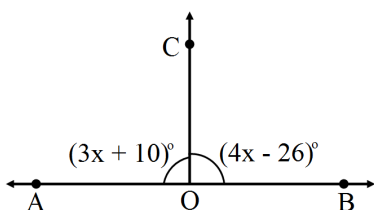
| (A) 12 | (B) 15 | (C) 18 | (D) 20 |

78. In the given figure, AB || CD. If $\angle AOC = 30°$ and $\angle OAB = 100°$ then $\angle OCD =$?
   a. 130º
   b. 150º
   c. 80º
   d. 100º

79. In the given figure, AOB is a straight line. If $\angle AOC = (3x + 10)°$ and $\angle BOC = (4x - 26)°$, then $\angle BOC =$?
   a. 96º
   b. 86º
   c. 76º
   d. 106º

80. If one of the angles of a triangle is 130º then the angle between the bisectors of the other two angles can be:
   a. 50º
   b. 65º
   c. 90º
   d. 155º

*   A statement of Assertion (A) is followed by a statement of Reason (R). **[8]**
Choose the correct option.

81. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative

from the following:

Assertion: Supplement of angle is one fourth of itself. The measure of the angle is 144°.

Reason: Two angles are said to be supplementary if their sum of measure of angles is 180°.

    a.   Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.

    b.   Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

    c.   Assertion is true but the reason is false.

    d.   Both assertion and reason are false.

82. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:

Assertion: If the inclination between the arms is less than a right angle, it is called an acute angle.

Reason: 134° is type of acute angle.

    a.   Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.

    b.   Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

    c.   Assertion is true but the reason is false.

    d.   Both assertion and reason are false.

83. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:
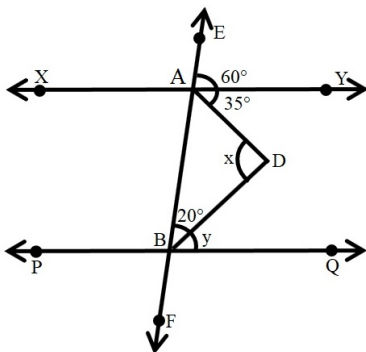
Assertion: In figure, if XY is parallel to PQ, then the angles x and y are 70° and 45° respectively.

Reason: Sum of angles of a triangle is 180°.

    a.   Both assertion and reason are true and reason is the correct explanation of assertion.

    b.   Both assertion and reason are true but reason is not the correct explanation of assertion.

    c.   Assertion is true but reason is false.

    d.   Assertion is false but reason is true.

84. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:

Assertion: The supplement of the angle (120 + a - 2b)° is (60 - a + 2b)°.

Reason: If the sum of two angle is 180° then the angle are supplementary.

    a. Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.

    b. Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

    c. Assertion is true but the reason is false.

    d. Both assertion and reason are false.

85. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:

Assertion: $\angle A$ and $\angle B$ are supplementary angles. $\angle A = x + 10°$ and $\angle B = x − 10°$ then ∠A and ∠B are 100° and 80°.

Reason: The angles x - 10° and 190°- x are supplementary.

    a. Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.

    b. Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

    c. Assertion is true but the reason is false.

    d. Both assertion and reason are false.

86. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:

Assertion: If two interior angles on the same side of a transversal intersecting two parallel lines are in the ratio 5 : 4, then the greater of the two angles is 100°

Reason: If a transversal intersects two parallel lines, then the sum of the interior angles on the same side of the transversal is 180°

    a. Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.

    b. Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

    c. Assertion is true but the reason is false.

    d. Both assertion and reason are false.

87. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:

Assertion: 91° is an example of acute angle.

Reason: A triangle which consists of three acute angles. It means that all the angles are less than 90 degrees is known as acute angle triangle.

    a. Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.

    b. Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

    c. Assertion is true but the reason is false.

    d. Both assertion and reason are false.

88. **Directions:** In the following questions, the Assertions (A) and Reason(s) (R) have been put forward. Read both the statements carefully and choose the correct alternative from the following:

Assertion: Two angles whose sum is equal to 90 degrees are called complementary angles.

Reason: 58° and 32° are the complements of each other.

    a.   Both Assertion and Reason are correct and Reason is the correct explanation for Assertion.

    b.   Both Assertion and Reason are correct and Reason is not the correct explanation for Assertion.

    c.   Assertion is true but the reason is false.

    d.   Both assertion and reason are false.

* Answer the following questions in one sentence. [1 Marks Each]   [4]

89. In the figure, POQ is a line. Ray OR is perpendicular to line PQ. OS is another ray lying between rays OP and OR. Prove that $\angle ROS = \frac{1}{2}(\angle QOS - \angle POS)$
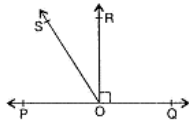
90. In Fig., if QT $\perp$ PR, $\angle$TQR = 40° and $\angle$ SPR = 30°, find x and y
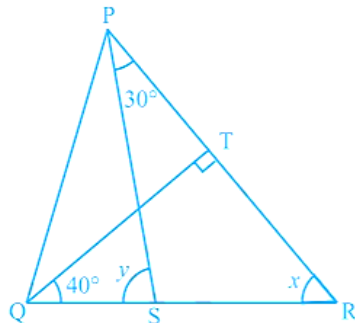
91. Write the supplement of the following angles:

138°

92. Write the complement of the following angles:

30°

* Answer the following short questions. [2 Marks Each]   [22]

93. In the given figure, $\angle$PQR = $\angle$PRQ, then prove that $\angle$PQS = $\angle$PRT
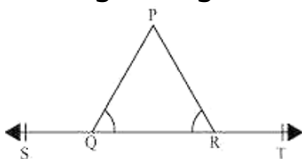
94. In figure ray OS stands on a line POQ, ray OR and ray OT are angle bisector of $\angle$POS and $\angle$SOQ respectively. If $\angle$POS = x, find $\angle$ROT.
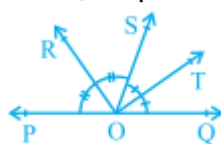

95. If a transversal intersects two lines such that the bisectors of a pair of corresponding angles are parallel, then prove that the two lines are parallel.
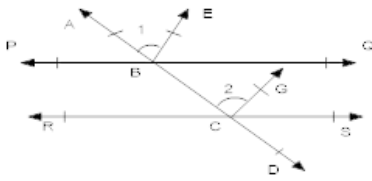
96. An angle is 14° more than its complementary angle. What is its measure?

97. In figure, three coplanar lines intersect at a point O, forming angles as shown in the figure. Find the values of x, y, z and u.
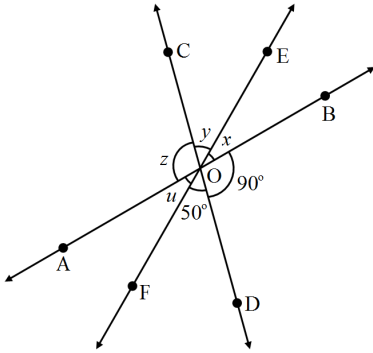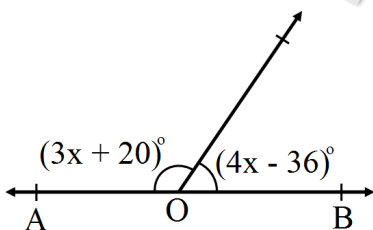

98. If an angle is 28° less than its complement, find its measure.

99. If the angles $(2x - 10)°$ and $(x - 5)°$ are complementary angles, find x.

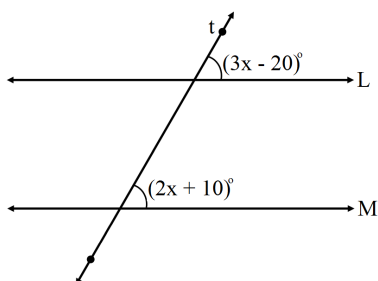100. In figure, lines AB, CD and EF intersect at O. Find the measures of $\angle AOC, \angle COF, \angle DOE$ and $\angle BOF$.
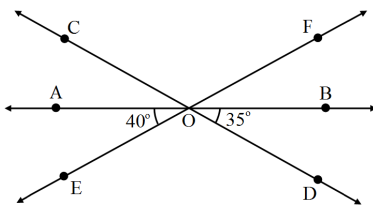
101. In figure, find the value of x.
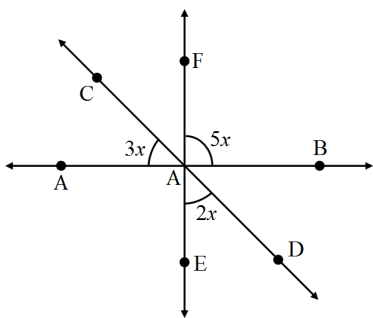
102. In the adjoining figure, what value of x will make AOB a straight line?

103. For what value of x will the lines l and m be parallel to each other?

(3x - 20)° →L

(2x + 10)° →M

t

* **Answer the following questions. [3 Marks Each]** **[21]**

104. 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 at C and again reflects back along CD. Prove that AB || CD.
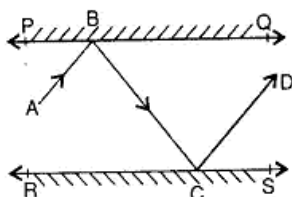
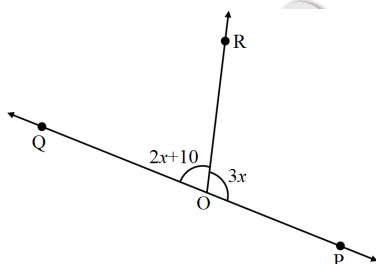105. In fig the side AB and AC of $\triangle$ ABC are produced to point E And D respectively. If bisector BO and CO of $\angle$CBE And $\angle$BCD respectively meet at point O, then prove that $\angle$ BOC = $90° - \frac{1}{2}\angle$ BAC
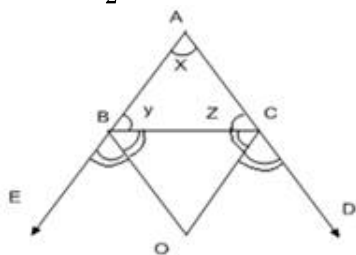
106. In figure, show that AB || EF.
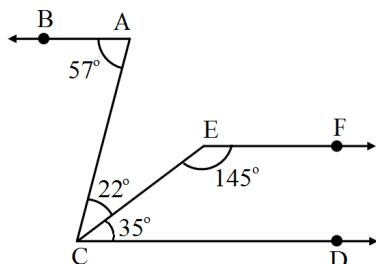
107. Given $\angle POR = 3x$ and $\angle QOR = 2x + 10$, Find the value of x for which POQ will be a line. (Figure 10.41).

108. In figure, AB || CD || EF and GH || KL. Find $\angle HKL$.
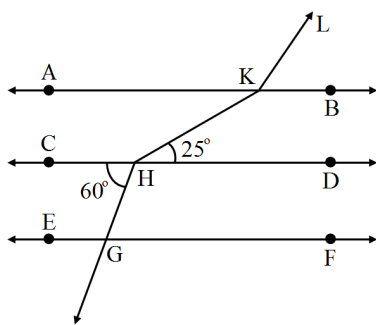
109. In the adjoining figure, AOB is a straight line. Find the value of x. Also, find $\angle AOC, \angle COD$ and $\angle BOD$.
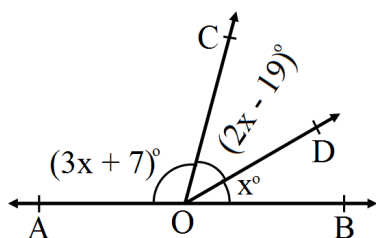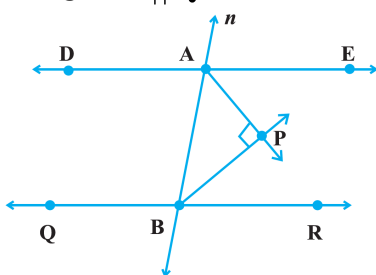

110. Find the value of x for which the angles (2x - 5)º and (x - 10)º are the complementary angle.
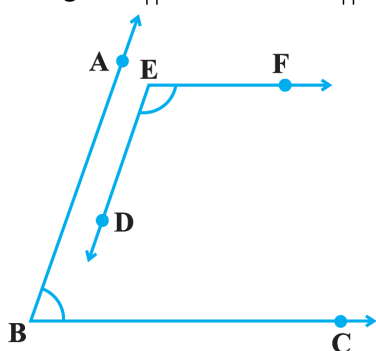
* **Questions with calculation. [4 Marks Each]** **[48]**

111. In Fig. $DE \| QR$ and AP and BP are bisectors of $\angle EAB$ and respectively. Find $\angle APB$
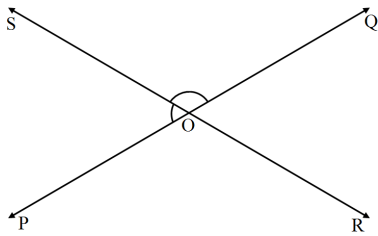

112. In Fig. $BA \| ED$ and $BC \| EF$ Show that $\angle ABC + \angle DEF = 180°$
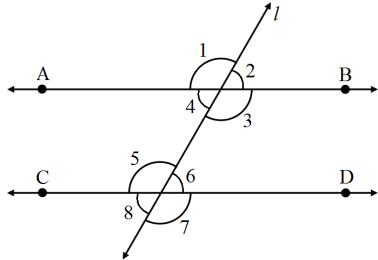

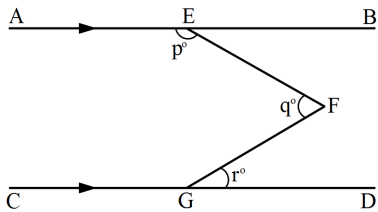**113.** Two unequal angles of a parallelogram are in the ratio 2 : 3. Find all its angles in degrees.

114. In figure, lines PQ and RS intersect each other at point O. If $\angle POR : \angle ROQ = 5 : 7$, find all the angles.
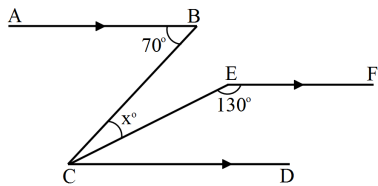
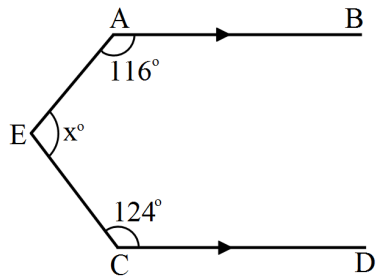115. In figure AB || CD and ∠1 and ∠2 are in the ratio 3 : 2. Determine all angles from 1 to 8.

116. In the given figure, AB || CD. Prove that P + q - r = 180.

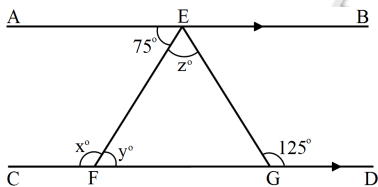117. In the given figure, AB || CD || EF. Find the value of x.

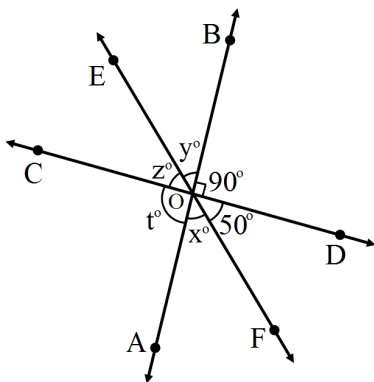
118. In the figure given below, AB || CD. Find the value of x in each case.
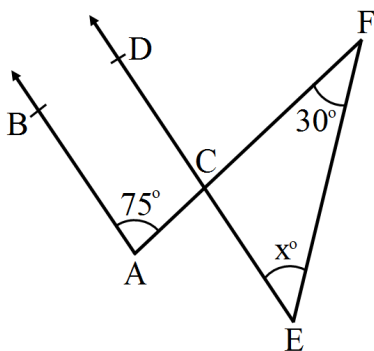

119. In the given figure, AB || CD. Find the value of x, y and z.

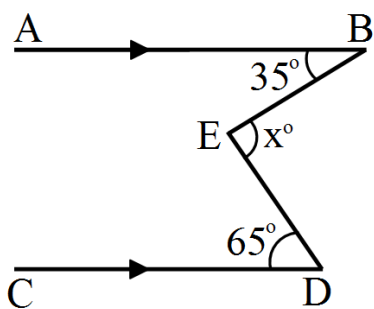120. In the adjoining figure, three coplanar lines AB, CD and EF intersect at a point O, forming angles as shown. Find the values of x, y, z and t.

121. In the given figure, AB || CD. Find the value of x.

122. In the figure given below, AB || CD. Find the value of x in each case.
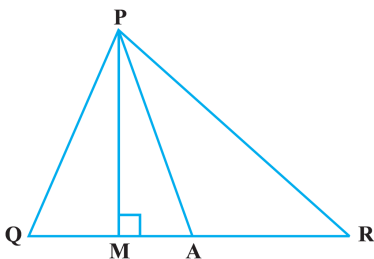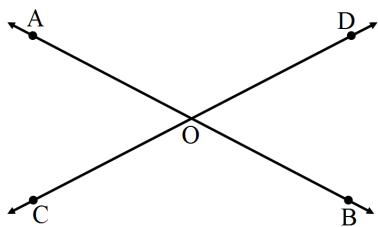

* Answer the following questions. [5 Marks Each] [35]

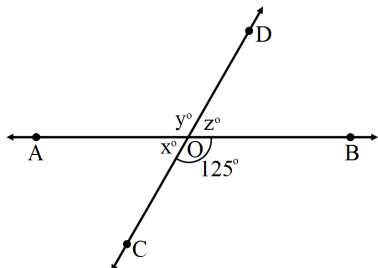123. The angles of a triangle are in the ratio 2 : 3 : 4. Find the angles of the triangle.

124. In Fig. $\angle Q > \angle R$, PA is the bisector of $\angle QPR$ and $PM \perp QR$ Prove that $\angle APM = \frac{1}{2}(\angle Q - \angle R)$.
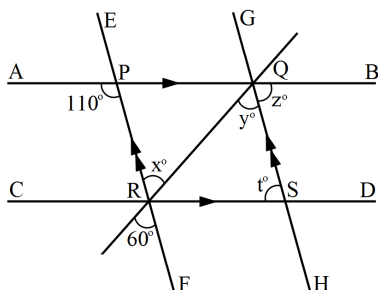

125. Two lines AB and CD intersect each other at a point O such that $\angle AOC : \angle AOD = 5 : 7$. Find all the angles.
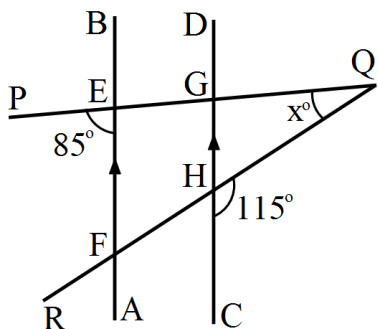
126. In the given figure, the two lines AB and CD intersect at a point O such that $\angle BOC = 125°$. Find the values of x, y and z.
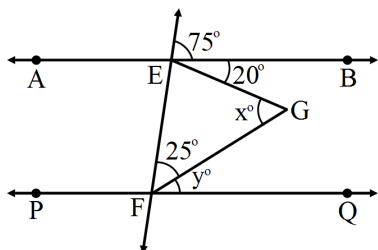

127. In the given figure, AB || CD and EF || GH. Find the value of x, y, z and t.

128. In the given figure, AB || CD. Find the value of x.
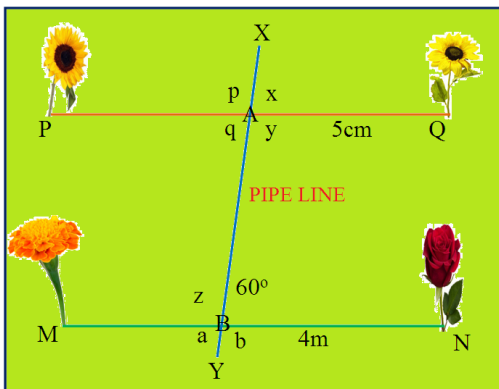

129. In the figure, AB || PQ. Find the value of x and y.

* **Case study based questions.**   [12]

130. Read the Source/ Text given below and answer any four questions:

Once 4 students from class IX F were selected for plantation of flower plants in the school garden. The selected students were Pankaj, Raju, Deepak and Renu.

As shown PQ and MN are the parallel lines of the plants. Pankaj planted a sunflower plant at P, thenRaju planted another sunflower at Q. Further, Deepak was called to plant any flowering plant at point M. He planted a marigold there. Now it was the turn of Renu, She was told to plant a flowering plant different from the three planted one So she planted a rose plat at N. There was a water pipeline XY which intersects PQ and MN at A and B and $\angle XBN = 60°$.

Answer the following questions:

i. What is the value $\angle z$?
   a. 60°
   b. 120°
   c. 180°
   d. 100°

ii. What is the value of $\angle X$?
   a. 60°
   b. 120°
   c. 180°
   d. 100°

iii. What is the value of p + q?
   a. 60°
   b. 120°
   c. 180°
   d. 100°

iv. Which angle is the corresponding angle to $\angle a$?
   a. $\angle z$
   b. $\angle p$
   c. $\angle b$
   d. $\angle q$

v. What is the value of $\frac{(p+q+a+z)}{6}$?
   a. 60°
   b. 120°
   c. 180°
   d. 100°

131. Read the Source/ Text given below and answer any four questions:

Maths teacher draws a straight line AB shown on the blackboard as per the following figure.
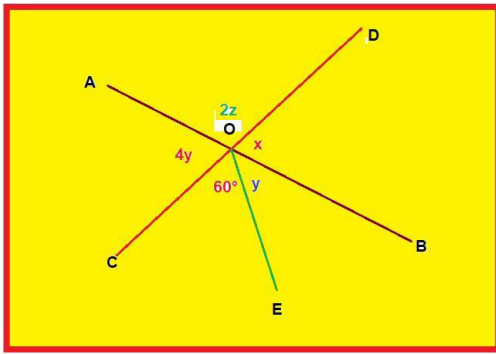
i. Now he told Raju to draw another line CD as in the figure.
ii. The teacher told Ajay to mark $\angle AOD$ as 2z.
iii. Suraj was told to mark $\angle AOC$ as 4y.
iv. Clive Made and angle $\angle COE = 60°$.
v. Peter marked $\angle BOE$ and $\angle BOD$ as y and x respectively.

Now answer the following questions:

i. What is the value of x?
   a. 48°
   b. 96°
   c. 100°
   d. 120°
ii. What is the value of y?
   a. 48°
   b. 96°
   c. 100°
   d. 24°
iii. What is the value of z?
   a. 48°
   b. 96°
   c. 42°
   d. 120°
iv. What should be the value of x + 2z?
   a. 148°
   b. 360°
   c. 180°
   d. 120°
v. What is the relation between y and z?
   a. 2y + z = 90°
   b. 2y + z = 180°
   c. 4y + 2z = 120°
   d. y = 2z

132. A parking lot for a city mall is shown below. The painted lines that separate the parking spaces are parallel.
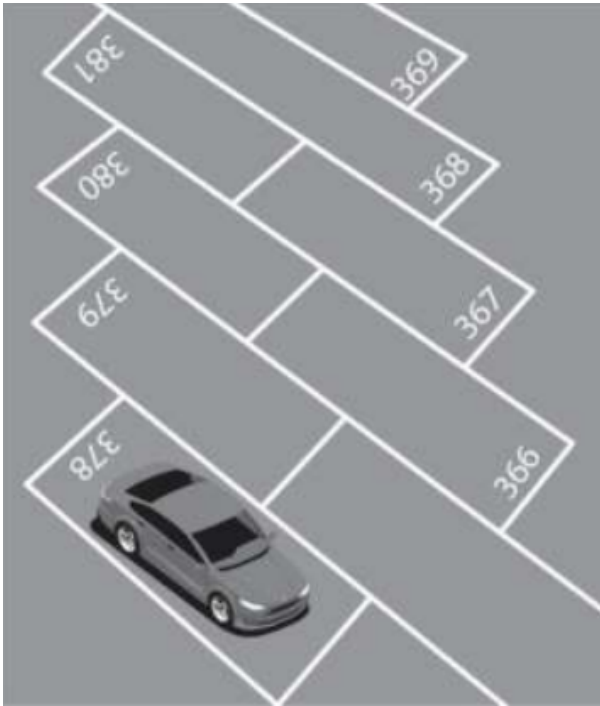
3. Parking space number 378 is inclined at 60° to the horizon line. At what angle is parking space 380 inclined to the horizontal line? Why?

----- if talent doesn't work hard then hardwork beat the talent -----