ASSIGNMENT NO. 3

SUBJECT: MATHEMATICS   **CLASS-VII**   **JULY'2025**

SIMPLE EQUATIONS

1. Sum of 5 times a number and 23 is 50. Find the number.

2. Solve the equations:

    (a) $3(x-1) + 7 = 11$ (b) $20 - (2x - 5) = 25$

3. Form an equation for each of the following statements.

    (a) 3 taken away from twice of y is 7.   (b) Two-fifths of a number p added to 7 gives 30.

4. Sum of two numbers is 65. The greater number is 15 more than the smaller one. Form an equation to find

    the smaller number (take the smaller number as p).

5. Check whether the value given in the brackets is the root (or solution) of the given equation or not.

    (a) $7p + 5 = 19$ [$p = -2$]   (b) $4m - 3 = -5$ [$m = -3$]

6. The sum of three consecutive numbers is 153. Find the numbers.

7. The sum of ages of father and his daughter is 75 years. If the age of the daughter is 25 years, find the age of

    her father.

8. If $\frac{x}{2} = 2$, then find the value of $3x + 2$.

9. A shopkeeper sells mangoes in two types of boxes, one small and one large. A large box contains as many as

    8 small boxes plus 4 loose mangoes. The number of mangoes in a large box is given to be 100. On the basis of

    the given information, answer the following questions:

    (a) Express the number of mangoes in each small box using a variable.

    (b) Set up an equation which gives the number of mangoes in a large box.

    (c) Calculate the number of mangoes in each small box and large box.
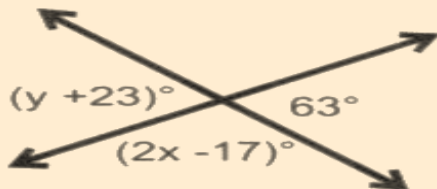
LINES AND ANGLES

1. In the given figure, find x. Further find ∠BOC, ∠COD and ∠AOD.
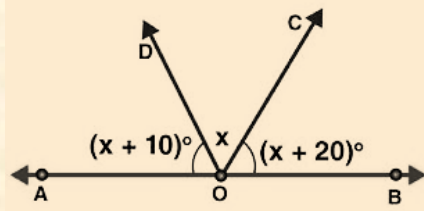
2. Find the angle which is $\frac{1}{5}$ of its supplement.

3. In the given figure, AB and CD are parallel lines intersected by a transversal PQ at L and M respectively, if ∠CMQ = 60°, find all other angles in the figure.
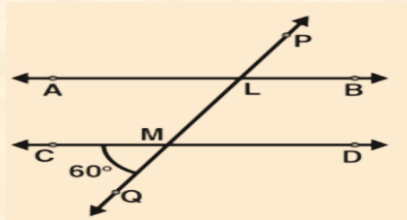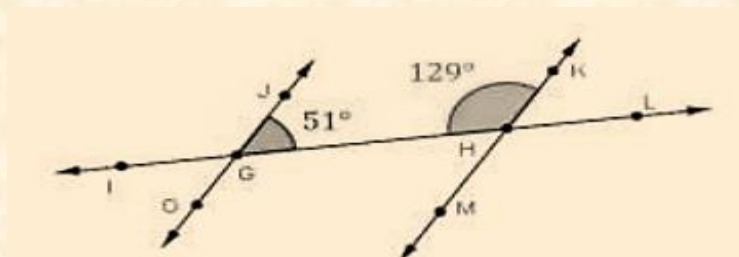

4. Find the angle which is equal to its complement.

5. In the given figure, find the value of x and y.

6. The difference in the measures of two supplementary angles is 30°. Find the measures of the angles.

7. In the given figure, XY is parallel to ZW, find the remaining angles from the figure.
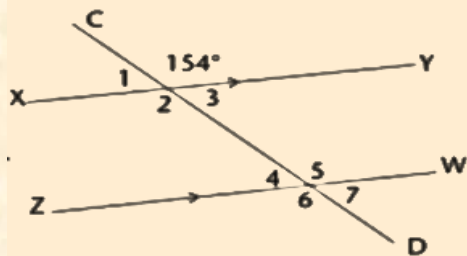
8. Are the two lines OJ and KM parallel? Give reasons.

ASSERTION AND REASONING BASED QUESTIONS:

DIRECTION: In the following questions, a statement of Assertion(A) is followed by a statement of Reason(R). Choose the correct option.

(a) Both Assertion and Reason are true and Reason is a correct explanation of Assertion.

(b) Both Assertion and Reason are true but Reason is not a correct explanation of Assertion.

(c) Assertion is true and Reason is false

(d) Assertion is false and Reason is true.

1) **Assertion:** 6x + 3 is a expression in variable x

   Reason: Expressions are formed by performing operations like addition, subtraction, multiplication and division on the variables.

2) **Assertion:** The value of the variable in an equation for which the equation is satisfied is called the solution of the equation.

   Reason: The solution of the equation x + 3 = 0 is 3.

3) **Assertion:** A right angle measures 90 degrees.

   Reason: A straight angle measures 180 degrees.

4) **Assertion:** If two lines are parallel, and a transversal intersects them, the corresponding angles are equal.

   Reason: Corresponding angles are formed on the same side of the transversal and between the two parallel lines.