## SHIVALIK PUBLIC SCHOOL

PRACTICE WORKSHEET

CLASS – VII

SUBJECT - MATHEMATICS

1. $\frac{1}{2}$ of 24 is_____.
2. Solve: $x + 5 = 9$ by trial and error method
3. Find the complement of 57^0.
4. Rewrite $\frac{-25}{45}$ in simplest form.
5. Examine whether the following are complementary or supplementary:

    i). $63^0, 27^0$ ii. $105^0, 75^0$

6. Check whether the value in bracket is a solution of given equation or not:
$$5y - 8 = 12 \quad (y = 3)$$
7. Draw the number line and represent the rational number $\frac{-7}{4}$ on the number l

    8.   Identify from the figure:
        a. vertically opposite angles
        b. pairs of corresponding
        c. pair of alternate angle
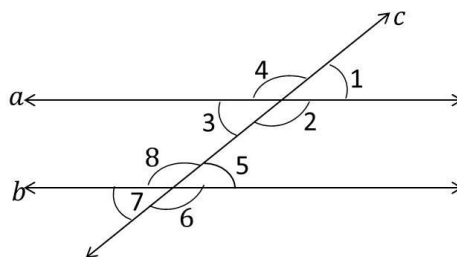
9. Find x, y, z in the given fig.
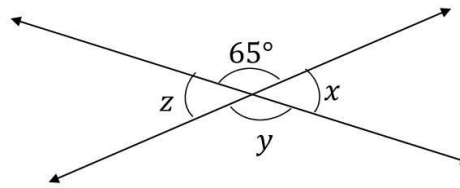
10. Write equations for the given statements:

a. Sum of numbers m and 13 gives 15

b. Three-fourth of t gives 20
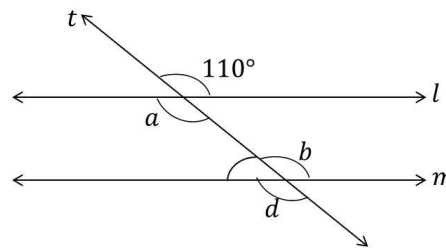
c. Five times b plus 5 gets you 55

11. List five rational numbers between -2 and -1.

12. Solve the given equation: $4 = 5(x - 2) - 1$.

13. Find value of a, b, c, d from the figure. If line $l \parallel m$ and t is transversal.

14. Find:

1) $\dfrac{-3}{4} + \dfrac{2}{5}$

2) $\dfrac{9}{2} \times \dfrac{-7}{4}$

15. The teacher tells the class that highest marks obtained by student in her class are twice the lowest marks plus 7. The highest score is 87. What is the lowest score.

16. Fill-ups:

Sum of linear pair angles is ....

Vertically opposite angles made by two intersecting lines are always.............................

17. Arrange in descending order: $\dfrac{-3}{7}, \dfrac{-3}{2}, \dfrac{3}{4}$

18. Raju's father's age is 5 years more than three times Raju's age. Find Raju's age, if his father is 44 years old.

(a) A straight line that intersects two or more straight lines at distinct points in a plane is called a _____.

(b) The angles in a linear pair are _____.

(c) The compliment of half of a right angle is _____.

(d) The supplement of 00 is _____.

19. Write true or false:

      (a) Two obtuse angles can form a linear pair.

      (b) The angle in linear pair are always adjacent to each other.

      (c) In a pair of vertically opposite angles, the angles are complementary.

20. An angle is 45° larger than a right angle. Find the angle.

21. Two supplementary angles are in the ratio of 7: 11. Find the angles.

22. 45% of an angle is the complement of 63° . Find the angle.

Ch- Perimeter and Area

Mental Ability

1. Fill in the blanks:

(a) The area of a triangle with base 5 cm and height 6 cm is _____ cm².

(b) The area of a square is 49 cm². What is the length of each side?
    i) 5 cm   ii) 7 cm   iii) 9 cm   iv) 11cm

(c) The area of a rectangle with length 8 cm and breadth 5 cm is

    _____ cm².

(d) The perimeter of a triangle with sides 5 cm, 6 cm, and 7 cm is

    _____ cm.

(e) The perimeter of a triangle is the sum of the lengths of its sides.

    (True/False)

(f) The perimeter of a square is 40 cm. What is the length of each side?

    i) 5 cm   ii) 10 cm   iii) 15 cm   iv) 20 cm

Solve the following

2) A rectangular garden measures 15 meters by 8 meters. A path that is 2 meters wide is built around the garden. What is the area of the path?

3) A field in the form of a parallelogram has a base of 18 dam and an altitude of 9 dam. Find the cost of watering the field at the rate of 75 paise per square metre.

4) Find the area and circumference of a semicircle whose diameter is 7 cm.

Q3) Assertion and Reason

In each of the following questions, an assertion (A) and a corresponding

Reason(R) supporting it is given.

Study both the statements and state which of the following is correct.

(i) Both A and R are true and R is the correct explanation of A .

(ii) Both A and R are true but R is not the correct explanation of A.

(iii) A is true, but R is false.

(iv) A is false, but R is true.

1. Assertion(A): The perimeter of a square is 4 times the length of its side.

Reason(R) : All sides of a square are equal.

2. Assertion(A): The perimeter of a triangle is the sum of the lengths of its sides.

Reason(R) : The perimeter of any polygon is the sum of the lengths of its sides.

Ch-Properties of Triangles

Mental Ability

1. Fill in the blanks:

(a) The sum of the lengths of any two sides of a triangle must be greater than the length of the _____ side.

(b) What is the name of a triangle with two equal sides?

(i) Equilateral   (ii)Isosceles   (iii) Scalene   (iv) Right-angled

(c) The sum of the interior angles of a triangle is always _____

(d) The longest side of a right-angled triangle is called the _____.

Solve the following

2) The hypotenuse of a right angled triangle is 41 cm long. If one of the legs of this triangle is 9 cm, then find the length of the other leg.

3) A 53 m long ladder when set against the wall of a house reaches a height of 45 m. Find the distance of the foot of the ladder from the wall of a house.

4) Renu takes the shortest route to her home by walking diagonally across a rectangular park of measures 150m x 80m. How much shorter is the route across the park than the route around its edges ?

5) Check if 5, 12, 13 are Pythagorean triplets.

3) Assertion and Reason

In each of the following questions, an assertion (A) and a corresponding

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(ii) Both A and R are true but R is not the correct explanation of A.

(iii) A is true, but R is false.

(iv) A is false, but R is true.

1. Assertion(A): Two sides of a triangle are of lengths 6 cm and 2.5 cm. The length of the third side of triangle cannot be 2.08

   Reason(R) : The difference between the two sides of a triangle should be less than the third side.