

MATHEMATICS WORKSHEET

Class VIII

Time: 40 minutes

Maximum Marks: 15

General Instructions:

1. All questions are compulsory.
2. Questions 1 to 10 are Multiple Choice Questions carrying 1 mark each.
3. Question 11 is a Case Study based question carrying 5 marks (1 mark for each part).
4. Write the correct option letter along with the answer for the MCQs.
5. Use of a calculator is not permitted.

SECTION A — Multiple Choice Questions

(10 × 1 = 10 marks)

1. If $6 : x :: 2 : 13$, then find the value of x .
(a) 35 (b) 32
(c) 39 (d) 50
2. A number divided by 9 leaves remainder 5. Then the number is
(a) $9p + 5$ (b) $5p + 9$
(c) $9p + 2$ (d) $9p - 6$
3. $2x + 5x + 7y$ is a
(a) Monomial (b) Binomial
(c) Trinomial (d) Not a polynomial
4. How many natural numbers lie between 25^2 and 26^2 ?
(a) 51 (b) 50
(c) 60 (d) 49
5. The Roman numeral of 666 is
(a) DCLVI (b) DCLXVI
(c) DCXLVI (d) DCCLXVI
6. A number has a digital root of 9. Which of the following is true?
(a) It is divisible by 3 but not necessarily by 9
(b) It is divisible by both 3 and 9
(c) It is odd
(d) It leaves a remainder of 1 when divided by 9
7. The standard form of 0.00000079 is
(a) 7.9×10^{-5} (b) 7.9×10^8
(c) 7.9×10^{-7} (d) 7.9×10^{-3}
8. **Assertion (A):** The sum of a multiple of 6 and a multiple of 3 is always a multiple of 9.
Reason (R): Every multiple of 6 and every multiple of 3 is divisible by 3.
(a) Both A and R are true, and R is the correct explanation of A
(b) Both A and R are true, but R is not the correct explanation of A
(c) A is true, but R is false
(d) A is false, but R is true
9. Which of the following expressions is equivalent to $(15x - 6)^2$?
(a) $225x^2 - 36$ (b) $225x^2 - 180x + 36$

(c) $30x^2 - 36$

(d) $225x^2 + 180x + 36$

10. For an isosceles trapezium, which of the following is true?

(a) Diagonals are equal

(b) Opposite angles are equal

(c) All sides are equal

(d) Diagonals bisect each other

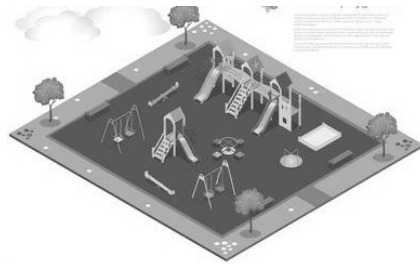
SECTION B — Case Study Based Question

(1 × 5 = 5 marks)

11. A playground is in the shape of a square whose area is 256 m^2 , with each side $(5x - 4) \text{ m}$. One day Raj, along with his two friends Ajay and Aman, went to play there with a bicycle. Someone stole Raj's bicycle, but Ajay and Aman helped him by contributing ₹ $(4a + 60)$ and ₹ $(6a + 10)$ respectively to buy a new bicycle. The cost of the bicycle was ₹4200.

On the basis of the information given in the passage, answer the following questions:

- (a) Find the value of x .
- (b) Write the algebraic expression for the area of the ground and for the total cost of the bicycle.
- (c) What is the value of a ?
- (d) What was the amount given by Ajay and Aman to Raj?
- (e) What is the perimeter of the playground in terms of x ?



*** ALL THE BEST ***