BCM SCHOOL, BASANT AVENUE, DUGRI, LUDHIANA.

SEPTEMBER ASSIGNEMENT ANSWER KEY/HINTS (2025-26)

CLASS- IX (MATHEMATICS)

TOPIC: INTRODUCTION TO EUCLID'S GEOMETRY, LINEAR EQUATIONS IN TWO VARIABLES, CO-ORDINATE GEOMETRY, HERON'S FORMULA, STATISTICS

1. (c) (-5, 3)

2. (d) y = 3x

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

4. PR = QS
PQ + QR = QR + RS
Subtract QR from both sides,
PQ + QR – QR = QR + RS – QR
PQ = RS
We have used Euclid's axiom which states If equals are subtracted from equals, the remainders are equal.

5. Let cost of ball be y and cost of toy horse be x.
x = 3y
Solutions are (3, 1) ; (6,2)…..

6. Area of rectangular field = 3000 m²
Area of Triangle = 150 √ 26 m² = 764.85 m²
Remaining Area = 3000 – 764.85 =2235.15 m²

7.

PO + OR = PR…….(1)
PO = OR (GIVEN)……(2)
PO+ PO = PR [Using 1 and 2]
2 PO = PR
PO = ½ PR

8.

Let the sides of the original triangle be a, b, c and its semi-perimeter be

$s = \frac{a+b+c}{2}$.

By Heron's formula, the area of the triangle is

$$\Delta = \sqrt{s(s-a)(s-b)(s-c)}.$$

If each side is doubled, the new sides become $2a, 2b, 2c$. The semi-perimeter of the new triangle is

$$s' = \frac{2a+2b+2c}{2} = a + b + c = 2s.$$

The area of the new triangle is

$$\sqrt{s'(s'-2a)(s'-2b)(s'-2c)}.$$

Substituting $s' = 2s$, we get

$$= \sqrt{2s(2s-2a)(2s-2b)(2s-2c)} = \sqrt{16s(s-a)(s-b)(s-c)}.$$

This is equal to

$$4\sqrt{s(s-a)(s-b)(s-c)} = 4\Delta.$$

Therefore, the area of the new triangle is four times the area of the original triangle, and the required ratio is

$4 : 1.$