

HERON'S FORMULA

1. The area of a triangle is 150 cm^2 and its sides are in the ratio 3 : 4 : 5. What is its perimeter? **1**
 a. 10 cm b. 30 cm c. 45 cm d. 60 cm
2. The graph of which of the following equations passes through the origin? **1**
 a. $y = 2x + c$ b. $y = 2x - c$ c. $y = 2x$ d. $y = 4x - 2$
3. If the perimeter of an equilateral triangle is 60 cm, then what is its area? **1**
 a. $200\sqrt{2} \text{ cm}^2$ b. $100\sqrt{2} \text{ cm}^2$ c. $100\sqrt{3} \text{ cm}^2$ d. $200\sqrt{3} \text{ cm}^2$
4. The graph of the linear equation $3x + 5y = 15$ cuts the x-axis at the point **1**
 a. (5, 0) b. (3, 0) c. (0, 5) d. (0, 3)
5. An isosceles right triangle has area 8 cm^2 . The length of its hypotenuse is **1**
 a. $\sqrt{32}$ b. $\sqrt{16}$ c. $\sqrt{48}$ d. $\sqrt{24}$
- (A) Both Assertion and Reason are true and Reason is the correct explanation of 'Assertion'.
 (B) Both Assertion and Reason are true and Reason is not the correct explanation of 'Assertion'.
 (C) Assertion is true but Reason is false.
 (D) Assertion is false but Reason is true.
6. **Assertion (A)** The side of an equilateral triangle is 6 cm then the height of the triangle is 9 cm.
Reason (R) The height of an equilateral triangle is $\frac{\sqrt{3}a}{4}$. **1**
7. **Assertion (A)** The sides of a triangle are in the ratio of 25: 14: 12 and its perimeter is 510 m. Then the greatest side is 250 cm.
Reason (R) Perimeter of a triangle = $a + b + c$, where a, b, c are sides of a triangle. **1**
8. Write $3x + 2y = 18$ in the form of $y = mx + c$. Find the value of m and c. Is (4, 3) lies on this linear equation? **2**
9. Find the height of a trapezium in which parallel sides are 25 cm 77 cm and non-parallel sides are 26 cm and 60 cm. Given the area of the trapezium as 1644 cm^2 . **3**
10. A park in the shape of a quadrilateral ABCD has $\angle C = 90^\circ$. $AB = 18 \text{ m}$, $BC = 24 \text{ m}$, $CD = 10 \text{ m}$ and $AD = 16 \text{ m}$. How much area does it occupy? **2**

11. A farmer has a triangular field with sides 240 m, 200 m and 360 m, where he grew wheat. In another triangular field with sides 240 m, 320 m and 400 m adjacent to the previous field, he wanted to grow potatoes and onions (see figure). He divided the field into two parts by joining the mid-point of the longest side to the opposite vertex and grew potatoes in one part and onions in the other part.

- i. How much area has been used for wheat? **1**
- ii. How much area has been used for potatoes? **2**

OR

Find the cost of fencing the whole potato along with onion area once at the rate of Rs 60 per meter.

- iii. How much area has been used for onions? **1**

