

## CHAPTER-10 | : Heron's Formula

### QUIZ PART-03

**1. In a triangle, if two sides are 18 cm and 10 cm, and the perimeter is 42 cm, what is the area?**

- A)  $84 \text{ cm}^2$
- B)  $60 \text{ cm}^2$
- C)  $70 \text{ cm}^2$
- D)  $75 \text{ cm}^2$  (C)

**Explanation:** Using Heron's formula, the area is  $70 \text{ cm}^2$ .

**2. If the sides of a triangle are in the ratio 12:17:25 and the perimeter is 540 cm, what is the area?**

- A)  $3240 \text{ cm}^2$
- B)  $1800 \text{ cm}^2$
- C)  $1200 \text{ cm}^2$
- D)  $900 \text{ cm}^2$  (A)

**Explanation:** The area is calculated by finding the side lengths from the ratio and using Heron's formula.

**Q3. An isosceles triangle has a perimeter of 30 cm, and each of the equal sides is 12 cm. What is the area?**

- A)  $50 \text{ cm}^2$
- B)  $40 \text{ cm}^2$
- C)  $36 \text{ cm}^2$
- D)  $30 \text{ cm}^2$  (B)

**Explanation:** Using Heron's formula, the area is  $40 \text{ cm}^2$ .

**4. In a triangle with sides 12 cm, 17 cm, and 25 cm, the perimeter is:**

- A) 54 cm
- B) 44 cm
- C) 48 cm
- D) 40 cm (A)

**Explanation:** The perimeter is the sum of the three sides:  $12 + 17 + 25 = 54 \text{ cm}$ .

**5. If a triangle has sides 6 cm, 8 cm, and 10 cm, its area using Heron's formula is:**

- A)  $20 \text{ cm}^2$
- B)  $24 \text{ cm}^2$
- C)  $30 \text{ cm}^2$
- D)  $36 \text{ cm}^2$  (B)

**Explanation:** The area of the triangle is  $24 \text{ cm}^2$ , using Heron's formula.

**6. What does Heron's formula calculate?**

- A) Area of a circle
- B) Area of a triangle
- C) Perimeter of a triangle
- D) Volume of a cone (B)

**Explanation:** Heron's formula calculates the area of a triangle.

**7. The semi-perimeter of a triangle with sides 10 cm, 14 cm, and 16 cm is:**

- A) 20 cm
- B) 18 cm
- C) 22 cm
- D) 25 cm (B)

**Explanation:** The semi-perimeter  $s = (10+14+16)/2 = 20 \text{ cm}$ .

**8. The area of a triangle with sides 7 cm, 8 cm, and 9 cm using Heron's formula is:**

- A)  $26 \text{ cm}^2$
- B)  $24 \text{ cm}^2$
- C)  $28 \text{ cm}^2$
- D)  $30 \text{ cm}^2$  (A)

**Explanation:** Using Heron's formula, the area is  $26 \text{ cm}^2$ .

**9. In a triangle with sides 15 cm, 25 cm, and 30 cm, the semi-perimeter is:**

- A) 35 cm
- B) 35.5 cm
- C) 40 cm
- D) 45 cm (A)

**Explanation:** The semi-perimeter is  $(15+25+30)/2 = 35 \text{ cm}$ .

**10. The area of a triangle with sides 5 cm, 12 cm, and 13 cm is:**

- A)  $30 \text{ cm}^2$
- B)  $60 \text{ cm}^2$
- C)  $36 \text{ cm}^2$
- D)  $50 \text{ cm}^2$  (A)

**Explanation:** The area is  $30 \text{ cm}^2$  using Heron's formula.