



Heron's Formula Ex 12.1 Q1

Answer :

Whenever we are given the measurement of all sides of a triangle, we basically look for Heron's formula to find out the area of the triangle.

If we denote area of the triangle by A , then the area of a triangle having sides a , b , c and s as semi-perimeter is given by;

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

$$\text{Where, } s = \frac{a+b+c}{2}$$

We are given:

$$a = 150 \text{ cm}$$

$$b = 120 \text{ cm}$$

$$c = 200 \text{ cm}$$

Here we will calculate s ,

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

$$s = \frac{150+120+200}{2}$$

$$s = \frac{470}{2}$$

$$s = 235 \text{ cm}$$

So the area of the triangle is:

$$A = \sqrt{235(235-150)(235-120)(235-200)}$$

$$A = \sqrt{235(85)(115)(35)}$$

$$A = \sqrt{80399375}$$

$$A = 8966.56 \text{ cm}^2$$

Heron's Formula Ex 12.1 Q2

Answer :

Whenever we are given the measurement of all sides of a triangle, we basically look for Heron's formula to find out the area of the triangle.

If we denote area of the triangle by A , then the area of a triangle having sides a , b , c and s as semi-perimeter is given by;

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

$$\text{Where, } s = \frac{a+b+c}{2}$$

We are given:

$$a = 9 \text{ cm, } b = 12 \text{ cm, } c = 15 \text{ cm}$$

Here we will calculate s ,

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

$$s = \frac{9+12+15}{2}$$

$$s = \frac{36}{2}$$

$$s = 18 \text{ cm}$$

So the area of the triangle is:

$$A = \sqrt{18(18-9)(18-12)(18-15)}$$

$$A = \sqrt{18(9)(6)(3)}$$

$$A = \sqrt{2916}$$

$$A = 54 \text{ cm}^2$$

***** END *****