

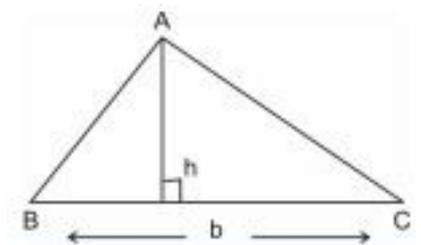
CBSE Class 09 Mathematics
Revision Notes
CHAPTER 12
HERON'S FORMULA

1. Area of a Triangle – by Heron's Formula

2. Application of Heron's Formula in finding Areas of Quadrilaterals

- Triangle with base 'b' and altitude 'h' is

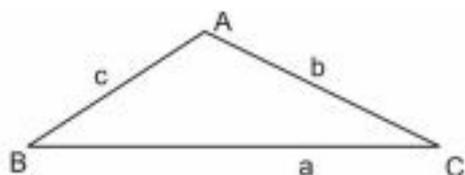
$$\text{Area} = \frac{1}{2} \times (b \times h)$$



- Area of an isosceles triangle whose equal side is $a = \frac{a^2}{2}$ square units
- Triangle with sides a, b and c

(i) Semi perimeter of triangle $s = \frac{a+b+c}{2}$

(ii) Area = $\sqrt{s(s-a)(s-b)(s-c)}$ sq. unit

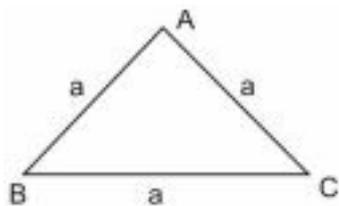


- Equilateral triangle with side 'a'

Perimeter = $3a$ units

Altitude = $\frac{\sqrt{3}}{2}a$ units

Area = $\frac{\sqrt{3}}{4}a^2$ square units



- Rectangle with length l , breadth b

$$\text{Perimeter} = 2(l + b)$$

$$\text{Area} = l \times b$$

- Square with side a

$$\text{Perimeter} = 4a \text{ units}$$

$$\text{Area} = a^2 \text{ sq. units}$$

$$\text{Area} = (\text{Diagonal})^2 \text{ sq. units}$$

- Parallelogram with length l , breadth b and height h

$$\text{Perimeter} = 2(l + b)$$

$$\text{Area} = b \times h$$

- Trapezium with parallel sides 'a' & 'b' and the distance between two parallel sides as 'h'.

$$\text{Area} = \frac{1}{2}(a + b)h \text{ square units}$$

