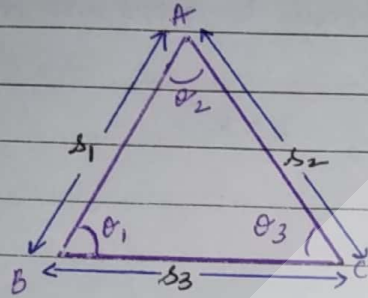


AREA AND PERIMETER TRICKS: (#1)

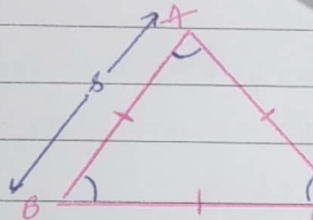
TRIANGLE:



- A polygon with three sides AB (of length s_1), BC (of length s_3) and AC (of length s_2) is the ΔABC .
- It has three angles θ_1, θ_2 and θ_3 .

TYPES OF TRIANGLE:

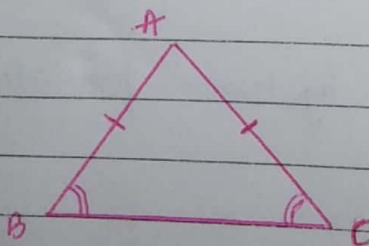
1. Equilateral Triangle



(All angles and all sides equal)

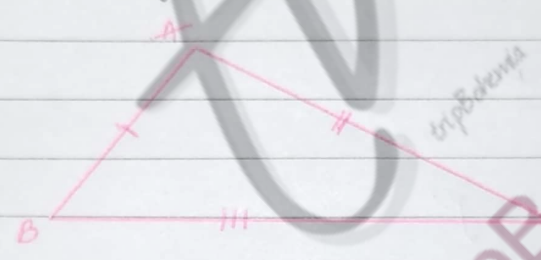
- A triangle with all sides of equal length
i.e. $AB = BC = CA = s$ units
- Area of (equilateral) triangle = $\left(\frac{\sqrt{3}}{4} s^2\right)$ unit square
- Perimeter of equilateral Triangle = $3(s)$ unit

2. Isosceles Triangle



- $AB = AC = s$ unit (two sides of equal length)
- In an isosceles triangle two sides have the same length.
 And, the angles opposite to equal sides are equal
 i.e. $\angle B = \angle C$
- Area of triangle = $\frac{1}{2} \times b \times h$
 $b \rightarrow$ base
 $h \rightarrow$ height
- Perimeter of triangle = sum of all sides.

3. Scalene Triangle:



- All sides are of unequal length in a scalene triangle.
- All angles are also of different measure.
- Area of triangle = $\frac{1}{2} \times b \times h$
- Perimeter of triangle = sum of all sides.

AREA

• Area of any triangle in general is given by:

$$A(\triangle ABC) = \left(\frac{1}{2} \times b \times h\right) \text{ unit square}$$

• Area of any triangle, by heron's formula:

$$\text{ar}(\Delta ABC) = \sqrt{s(s-a)(s-b)(s-c)}$$

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

and a, b and c are three sides of the given triangle.

Perimeter :

• Perimeter of any triangle = sum of three sides of triangle
 $= s_1 + s_2 + s_3$

, where s_1, s_2 and s_3 are the three sides of the given triangle.

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