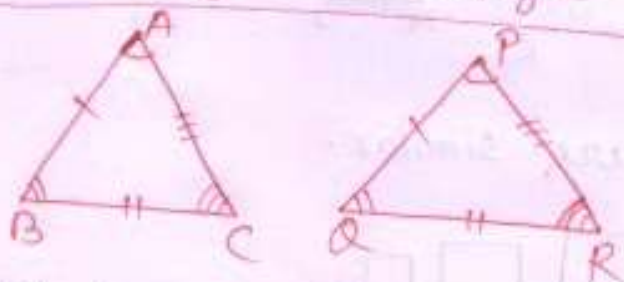


Triangle (त्रिभुज)

①

* Congruence Triangle and Similar Triangle

Congruence Triangle



① Corresponding Angles are equal.

$$\angle A = \angle P$$

$$\angle B = \angle Q$$

$$\angle C = \angle R$$

② Corresponding Sides are equal.

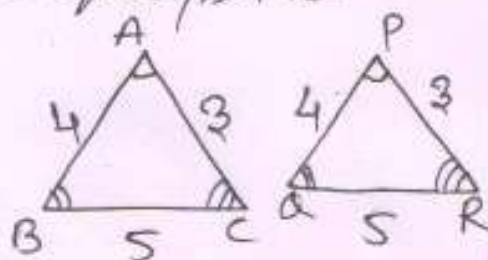
$$AB = PQ$$

$$BC = QR$$

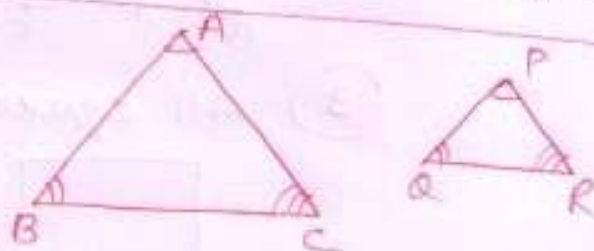
$$AC = PR$$

③ $\triangle ABC \cong \triangle PQR$

④ Two figures are congruence if their shape and size are equal/same.



Similar Triangle



① Corresponding Angles are equal.

$$\angle A = \angle P$$

$$\angle B = \angle Q$$

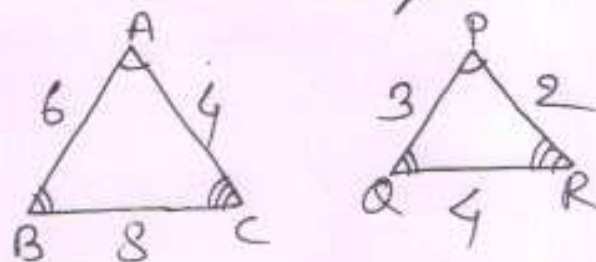
$$\angle C = \angle R$$

② Corresponding sides are proportional.

$$\frac{AB}{PQ} = \frac{BC}{QR} = \frac{AC}{PR}$$

③ $\triangle ABC \sim \triangle PQR$

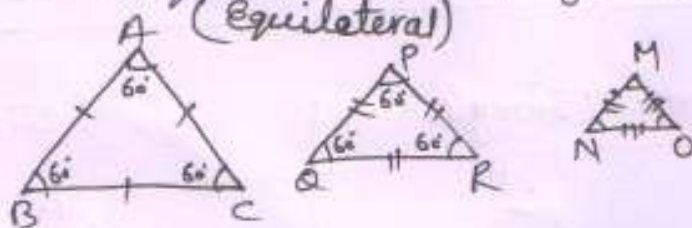
④ Two figures are similar if their shape are same and size are unequal.



Example:-

2

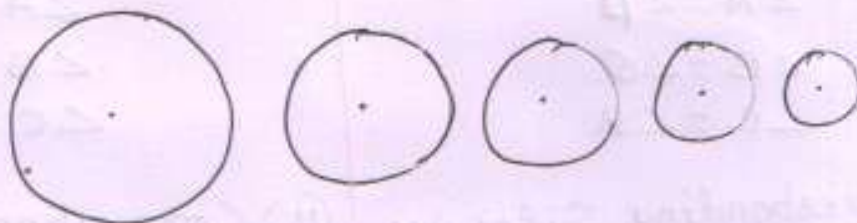
- ① All line Segments are similar.
- ② All Equivalent triangles are similar.
(Equilateral)



- ③ All squares are similar.



- ④ All circles are similar.



Note:-

Two congruent figures are always similar but two similar figures need not be congruent.

Exercise - 6.1

3

①

- i) Similar
- ii) Similar
- iii) Equilateral
- iv) Equal, Proportional

②

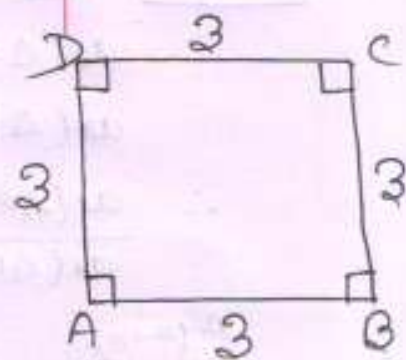
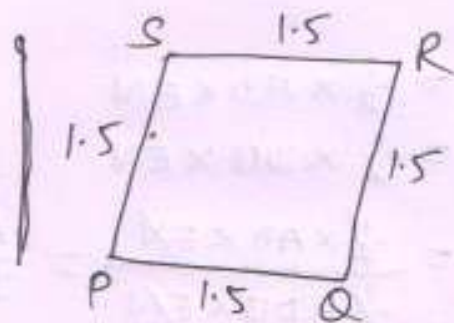
i) Similar figures:—

- (a) All circles
- (b) All squares
- (c) All Equilateral Triangles

ii) Non-Similar figures

- (a) A circle and a square
- (b) A square and a triangle

③



Ans:

Quad. ABCD and Quad. PQRS are not Similar because their corresponding angles are not equal.