Mathematics

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(Chapter – 6) (Triangles)
(Class 10)

Exercise 6.1

Question 1:

Fill in the blanks using the correct word given in brackets:

(i) All circles are _____. (congruent, similar)

(ii) All squares are _____. (similar, congruent)

(iii) All _____ triangles are similar. (isosceles, equilateral)

(iv) Two polygons of the same number of sides are similar, if (a) their corresponding angles are _____ and (b) their corresponding sides are _____. (equal, proportional)

Answer 1:

(i) All circles are *similar*. (congruent, similar)

(ii) All squares are *similar*. (similar, congruent)

(iii) All *equilateral* triangles are similar. (isosceles, equilateral)

(iv) Two polygons of the same number of sides are similar, if (a) their corresponding angles are *equal* and (b) their corresponding sides are *proportional*. (equal, proportional)

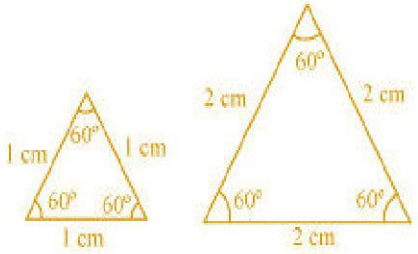
Question 2:

Give two different examples of pair of

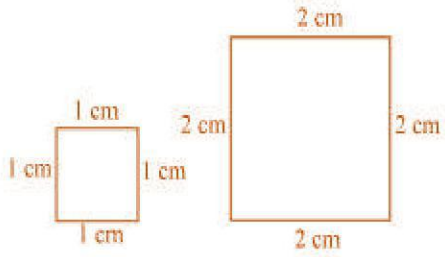
(i) similar figures. **(ii)** non-similar figures.

Answer 2:

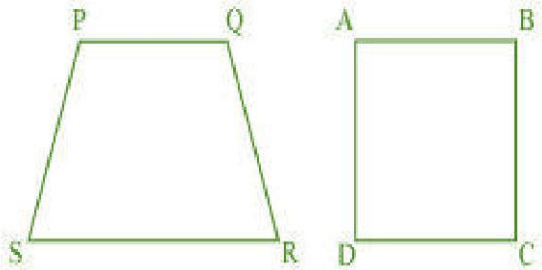
(i) Two equilateral triangles with sides 1 cm and 2 cm.



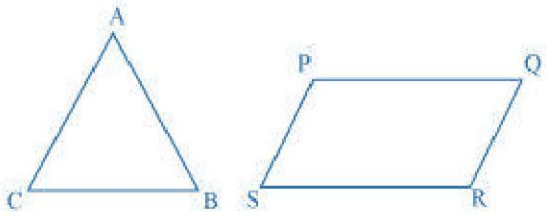
Two squares with sides 1 cm and 2 cm.



(ii) Trapezium and square

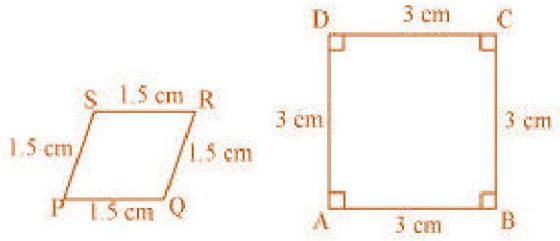


Triangle and parallelogram



Question 3:

State whether the following quadrilaterals are similar or not:



Answer 3:

The sides of quadrilateral PQRS and ABCD are in the same ratio, i.e. 1:2. The corresponding angles of the two quadrilaterals are not equal.

Hence, the two quadrilaterals are not similar.