# EXERCISE 6.1

## Question 1:

**Fill in the blanks by 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)**

## Solution:

**Fill in the blanks.**

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

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

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

(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.**

## Question 2:

**Give two different examples of pairs of**
**(i) similar figures.**
**(ii) non-similar figures.**

## Solution:

**(i) Similar figures:**

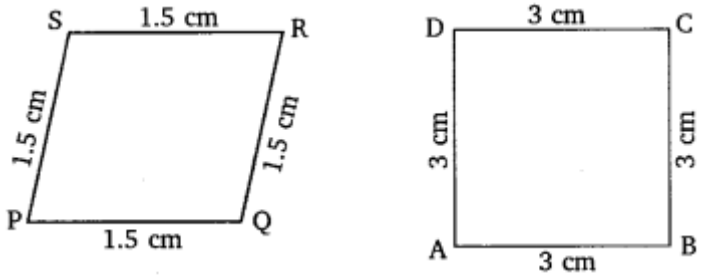
A pair of equilateral triangles of different side lengths, a pair of two rectabgles of different lengths and breadths, etc.

**(ii) Non-similar figures:**

A pair of rectangle and a parallelogram with angles not equal to 90°, a pair of an isosceles triangle and a scalene triangle, etc.

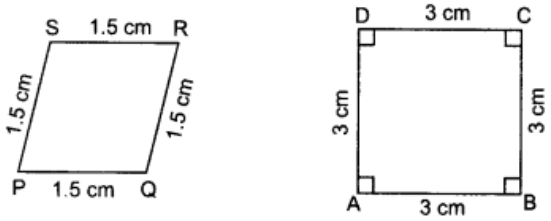
## Question 3:

**State whether the following quadrilaterals are similar or not.**




## Solution:

No, the sides of quadrilateral PQRS and ABCD are proportional but their corresponding angles are not equal.




$\therefore$ These are not similar.