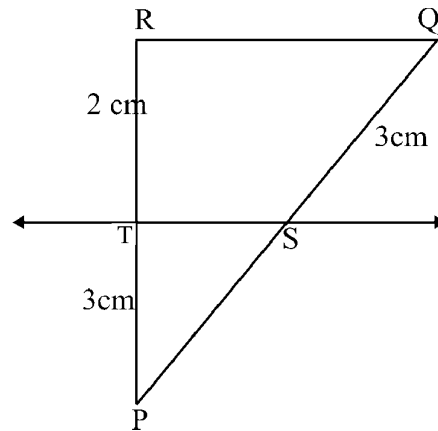


National Institute of Open Schooling (NIOS)
Secondary Course
Lesson –14: Similarity of Triangles
Worksheet – 14

1. Draw any five pair of geometrical figures those which are similar but not congruent.
2. Prove that if a line divides any two sides of a triangle in the same ratio, then the line is parallel to third side of the triangle.
3. In figure, if ST is parallel to QR find PS.



4. The perimeters of two similar triangles are 30 cm and 20 cm. respectively. If one side of the first triangle is 12 cm, determine the corresponding side of the second triangle.
5. A vertical stick 12 cm. long casts a shadow 8 cm long on the ground. At the same time a tower casts the shadow 40 m. long on the ground. Determine the height of the tower.
6. Prove that median of a triangle divides it into two triangles of equal area.
7. If two sides and a median bisecting one of these sides of a triangle are respectively proportional to the two sides and the corresponding median of another triangle, then the triangles are similar.
8. Find the ratio of the areas of two similar triangles, if two of their corresponding sides are of length as 3.5 cm and 7.0 cm respectively.

9. In a right angle triangle, the sides containing the right angle are of length 8cm and 6cm.
Find the length of the hypotenuse.

10. AD is the bisector of $\angle A$. If $BD = 4$ cm, $DC = 3$ cm, and $AB = 6$ cm determine AC.

