

# Triangles Worksheet for Class 10

1. The areas of two similar triangles are  $81 \text{ cm}^2$  and  $49 \text{ cm}^2$  respectively. Find the ratio of their corresponding heights. What is the ratio of their corresponding medians?
2. The areas of two similar triangles are  $169 \text{ cm}^2$  and  $121 \text{ cm}^2$  respectively. If the longest side of the larger triangle is 26 cm, find the longest side of the smaller triangle.
3. The corresponding altitudes of two similar triangles are 6 cm and 9 cm respectively. Find the ratio of their areas.
4. ABC is a triangle in which  $\angle A = 90^\circ$ ,  $AN \perp BC$ ,  $BC = 12 \text{ cm}$  and  $AC = 5 \text{ cm}$ . Find the ratio of the areas of  $\triangle ANC$  and  $\triangle ABC$ .
5. The corresponding altitudes of two similar triangles are 6 cm and 9 cm respectively. Find the ratio of their areas.
6. The areas of two similar triangles are  $169 \text{ cm}^2$  and  $121 \text{ cm}^2$  respectively. If the longest side of the larger triangle is 26 cm, find the longest side of the smaller triangle
7. D and E are the points on sides BC, CA and AB respectively. of a
8.  $\triangle ABC$  such that AD bisects  $\angle A$ , BE bisects  $\angle B$  and CF bisects  $\angle C$ . If  $AB = 5 \text{ cm}$ ,  $BC = 8 \text{ cm}$ , and  $CA = 4 \text{ cm}$ , determine AF, CE, and BD.
9. In a  $\triangle ABC$ , P and Q are the points on sides AB and AC respectively, such that  $PQ \parallel BC$ . If  $AP = 2.4 \text{ cm}$ ,  $AQ = 2 \text{ cm}$ ,  $QC = 3 \text{ cm}$ , and  $BC = 6 \text{ cm}$ , Find AB and PQ.
10. In a  $\triangle ABC$ , AD is the bisector of  $\angle A$ , meeting side BC at D.
  - (i) if  $BD = 2.5 \text{ cm}$ ,  $AB = 5 \text{ cm}$ , and  $AC = 4.2 \text{ cm}$ , find DC.