

CLASS 10 · HOTS · OLYMPIAD PREPARATION · DPP SHEET

Chapter 6: HOTS: Triangles (Class 10)

Daily practice problems: 8 questions with an answer key

Try every question on your own first. The answer key is on the last page.

1. Two similar triangles have areas 49 square cm and 81 square cm. A side of the larger one is 18.9 cm. Find the corresponding side of the smaller one.
2. In a right triangle ABC with the right angle at B, $AB = 5$ cm and $BC = 12$ cm. Find the length of the altitude from B to AC.
3. A 25 m ladder reaches a height of 24 m on a wall. Its top slips down 4 m. How far does its foot move away from the wall?
4. The diagonals of a trapezium ABCD (AB parallel to DC) meet at O. If $AB = 8$ cm and $CD = 12$ cm, find the ratio of the areas of triangles AOB and COD.
5. In triangle ABC, DE is parallel to BC, $AD = 4$ cm, $DB = 6$ cm and $AC = 15$ cm. Find AE .
6. D, E and F are the midpoints of the sides of triangle ABC and its area is 48 square cm. Find the area of triangle DEF.
7. The perimeters of two similar triangles are 30 cm and 20 cm. If one side of the first is 12 cm, find the corresponding side of the second.
8. A tower 12 m high casts a shadow 8 m long. At the same time a pole casts a shadow 6 m long. Find the height of the pole.

Answer Key

1. 14.7 cm.

2. $\frac{60}{13}$ cm.

3. 8 m.

4. 4 : 9.

5. 6 cm.

6. 12 square cm.

7. 8 cm.

8. 9 m.

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