TRIANGLES

AREA OF TWO SIMILAR TRIANGLE

EXERCISE

Q.1 In a trapezium ABCD, O is the point of intersection of AC and BD, AB || CD and AB $= 2 \times$ CD. If the area of ΔAOB $= 84$ cm^2. Find the area of ΔCOD.

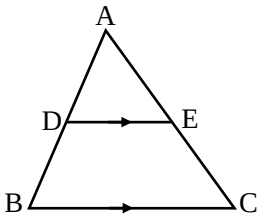
Q.2 Prove that the area of the triangle BCE described on one side BC of a square ABCD as base is one half the area of the similar triangle ACF described on the diagonal AC as base.

Q.3 D, E, F are the mid-point of the sides BC, CA and AB respectively of a ΔABC. Determine the ratio of the areas of ΔDEF and ΔABC.

Q.4 D and E are points on the sides AB and AC respectively of a ΔABC such that DE || BC and divides ΔABC into two parts, equal in area. Find $\frac{BD}{AB}$.

Q.5 Two isosceles triangles have equal vertical angles and their areas are in the ratio 16 : 25. Find the ratio of their corresponding heights.

Q.6 In the given figure, DE || BC and DE : BC $= 3 : 5$. Calculate the ratio of the areas of ΔADE and the trapezium BCED.



ANSWER KEY

1. $\Delta COD = 21 cm^2$

3. Area (ΔDEF) : Area (ΔABC) = 1 : 4.

4. $\frac{BD}{AB} = \frac{2-\sqrt{2}}{2}$

5. AL : DM = 4 : 5

6. $\frac{ar(\Delta ADE)}{ar(trap BCED)} = \frac{9}{16}$