TRIANGLES

CRITERIA FOR SIMILARITY OF TRIANGLES

EXERCISE

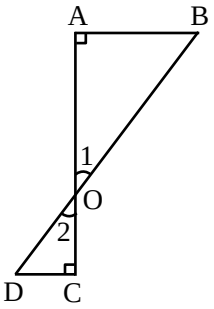
Q.1 In figure, QA and PB are perpendicular to AB. If AO = 10 cm, BO = 6 cm and PB = 9 cm. Find AQ.

Q.2 In figure, $\Delta ACB \sim \Delta APQ$. If BC = 8 cm, PQ = 4 cm, BA = 6.5 cm, AP = 2.8 cm, find CA and AQ.

Q.3 The perimeters of two similar triangles ABC and PQR are respectively 36 cm and 24 cm. If PQ = 10 cm, find AB.

Q.4 In figure, $\angle CAB = 90^\circ$ and $AD \perp BC$. If AC = 75 cm, AB = 1 m and BD = 1.25 m, find AD.

Q.5 In figure, if $\angle A = \angle C$, then prove that $\Delta AOB \sim \Delta COD$.



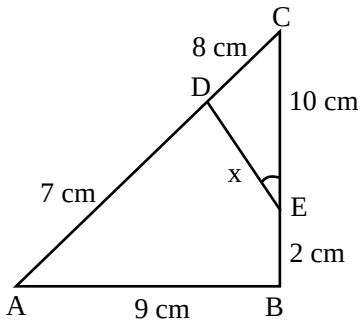
Q.6 In figure, $\frac{AC}{OC} = \frac{BO}{OD} = \frac{1}{2}$ and AB = 5 cm. Find the value of DC.

Q.7 In figure, considering triangles BEP and CPD, prove that BP × PD = EP × PC.

Q.8 D is a point on the side BC of ΔABC such that $\angle ADC = \angle BAC$. Prove that $\frac{CA}{CD} = \frac{CB}{CA}$ or, $CA^2 = CB \times CD$.

Q.9 P and Q are points on sides AB and AC respectively of ΔABC. If AP = 3 cm, PB = 6cm. AQ = 5 cm and QC = 10 cm, show that BC = 3PQ.

Q.10 In figure, $\angle A = \angle CED$, prove that $\Delta CAB \sim \Delta CED$. Also, find the value of x.



ANSWER KEY

1 AQ =15 cm

2 AC =5.6 cm and AQ= 3.25 cm

3 AB = 15 cm

4 AD = 93.75 cm

6 DC = 10 cm

10 x = 6 cm