

Construction

Dec 2023

1. Draw a circle of radius 3.5cm . Take a point P outside the circle at a distance of 7cm from the center of the circle and construct a pair of tangents to the circle from that point.
2. Construct a $\triangle ABC$ with sides $BC = 6\text{cm}$, $AB = 5\text{cm}$ and $\angle ABC = 60^\circ$. Then construct a triangle whose sides are $\frac{3}{4}$ of the corresponding sides of $\triangle ABC$.
3. In Figure-1, $DE \parallel BC$. If $\frac{AD}{DB} = \frac{3}{2}$ and $AE = 2.7\text{cm}$, then EC is equal to
(A) 2.0cm
(B) 1.8cm
(C) 4.0cm
(D) 2.7cm

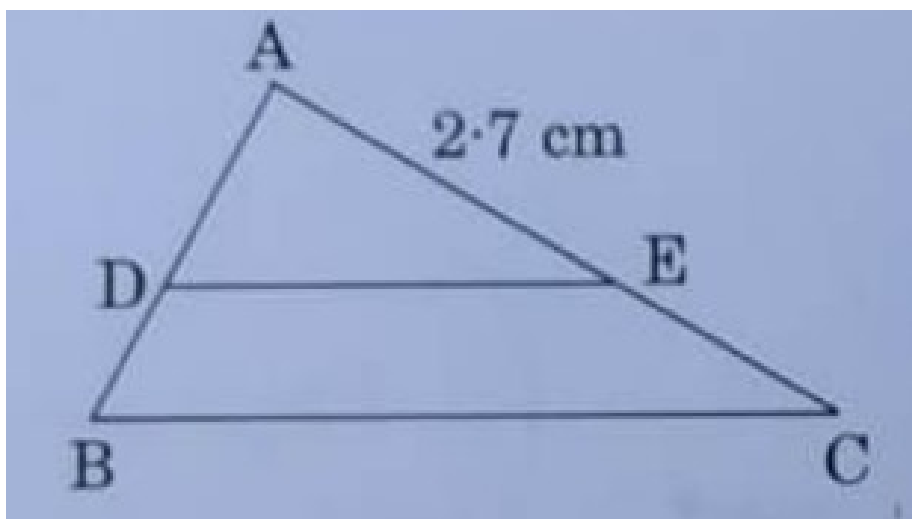


Figure 1:

4. In Figure-2, if $PQ \parallel BC$ and $PR \parallel CD$ that $\frac{QB}{AQ} = \frac{DR}{AR}$.