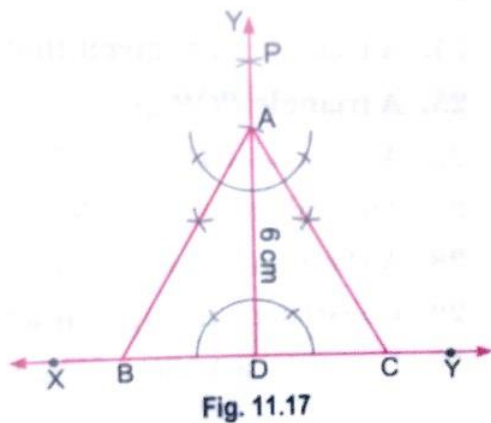


HOTS (Higher Order Thinking Skills)

Que 1. Construct an equilateral triangle if it's altitude is 6 cm.



Sol. Steps of Construction

- (i) Draw a line XY.
- (ii) Construct perpendicular PD at any point D on the line XY.
- (iii) From point D, cut-off line segment AD = 6 cm.
- (iv) Construct $\angle BAD = \angle CAD = 30^\circ$. Then ABC is the required triangle.

Justification

As $\angle A = \angle BAD + \angle CAD = 30^\circ + 30^\circ = 60^\circ$ and $AD \perp BC$ therefore, ΔABC is an equilateral triangle with altitude AD = 6 cm.