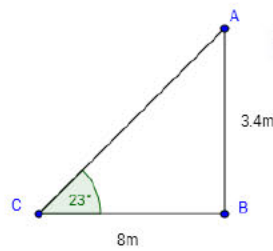


Student 4: High Achieved  
NZQA Intended for teacher use only

$$T \frac{O}{A} C \frac{A}{H} S \frac{O}{H}$$

Height of pole  
 $AB = \tan 23^\circ \times 8 = 3.4\text{m}$



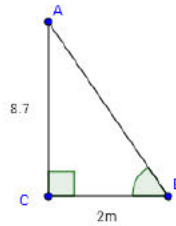
1

Dimensions of sail

$$AC = \sqrt{8^2 + 3.4^2}$$

$$= \sqrt{75.56}$$

$$= 8.7\text{m}$$

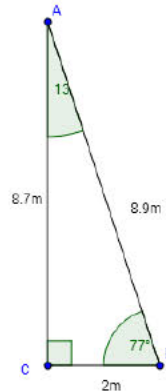


2

Triangle ACE

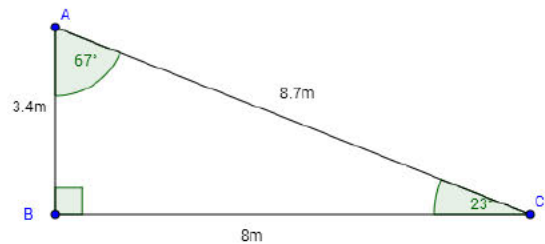
$$\angle CEA = \tan^{-1}\left(\frac{8.7}{2}\right)$$

$$= 77.1^\circ$$



3

Triangle ABC



$$\frac{x}{3.4} = \tan 13^\circ$$

$$x = 3.4 \times \tan 13^\circ$$

$$x = 0.78\text{m}$$

