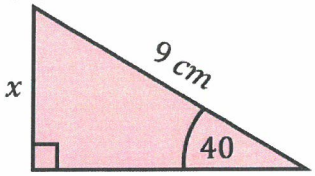
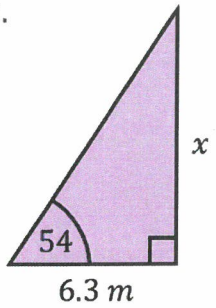
Finding Lengths Using Trigonometry

Find the missing lengths x.

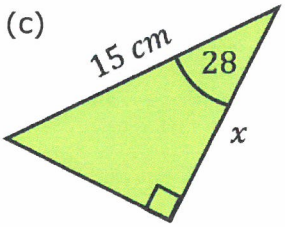
(a)



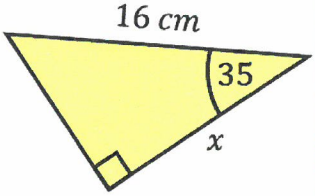
(b)



(c)



(d)



(a) $\sin 40 = \frac{x}{9}$ $x = 5.8\text{cm}$

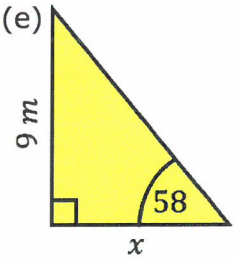
(b) $\tan 54 = \frac{x}{6.3}$ $x = 8.7\text{m}$

(c) $\cos 28 = \frac{x}{15}$ $x = 13.2\text{cm}$

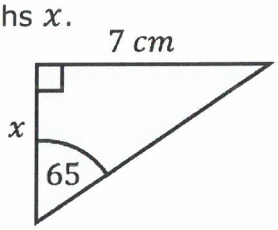
(d) $\cos 35 = \frac{x}{16}$ $x = 13.1\text{cm}$

Find the missing lengths x.

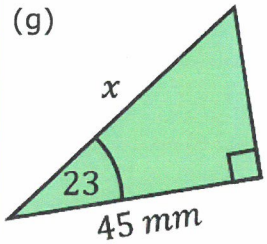
(e)



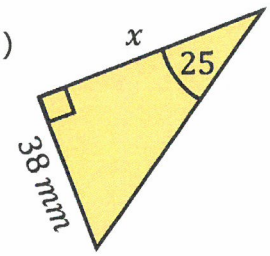
(f)



(g)



(h)



(e) $\tan 58 = \frac{9}{x}$ $x = 5.6\text{m}$.

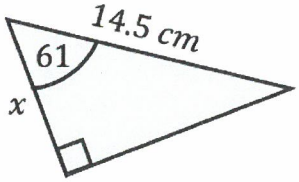
(f) $\tan 65 = \frac{7}{x}$ $x = 3.3\text{cm}$

(g) $\cos 23 = \frac{45}{x}$ $x = 48.9\text{mm}$

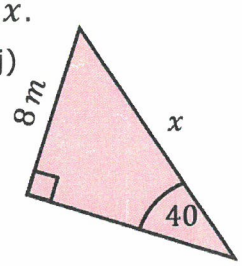
(h) $\tan 25 = \frac{38}{x}$ $x = 81.5\text{mm}$.

Find the missing lengths x.

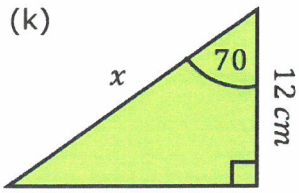
(i)



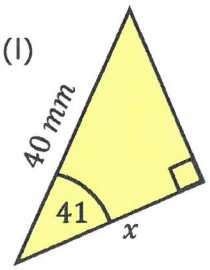
(j)



(k)



(l)



(i) $\cos 61 = \frac{x}{14.5}$ $x = 7.0\text{cm}$

(j) $\sin 40 = \frac{8}{x}$ $x = 12.4\text{m}$

(k) $\cos 70 = \frac{12}{x}$ $x = 35.1\text{cm}$

(l) $\cos 41 = \frac{x}{40}$ $x = 30.2\text{mm}$.