Worked answers | Pythagoras and Trigonometry

Finding a side

6 questions | 12 marks

Equivalent correct methods earn the corresponding marks.

1. Find opposite if $h = 14$ cm and $\theta = 28^\circ$. Give two decimal places. [2 marks]

$o = 14\sin 28^\circ$.

Evaluate in degrees and round the final length.

Answer: 6.57 cm

2. Find adjacent if $h = 18$ m and $\theta = 57^\circ$. Give two decimal places. [2 marks]

$a = 18\cos 57^\circ$.

The result is shorter than 18 m.

Answer: 9.80 m

3. Find opposite if $a = 11$ cm and $\theta = 35^\circ$. Give two decimal places. [2 marks]

$o = 11\tan 35^\circ$.

Answer: 7.70 cm

4. Find adjacent if $o = 8$ m and $\theta = 41^\circ$. Give two decimal places. [2 marks]

$\tan 41^\circ = \frac{8}{a}$.

$a = \frac{8}{\tan 41^\circ}$.

Answer: 9.20 m

5. Find hypotenuse if $a = 12$ cm and $\theta = 27^\circ$. Give two decimal places. [2 marks]

$\cos 27^\circ = \frac{12}{h}$.

$h = \frac{12}{\cos 27^\circ}$.

Answer: 13.47 cm

6. Find hypotenuse if $o = 9$ m and $\theta = 63^\circ$. Give two decimal places. [2 marks]

$\sin 63^\circ = \frac{9}{h}$.

$h = \frac{9}{\sin 63^\circ}$.

Answer: 10.10 m