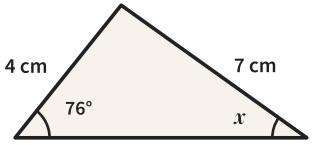
The Sine Rule: Finding an Angle

1

Find angle x to 1 decimal place.



each angle over the side opposite it

$$\frac{\sin x}{4} = \frac{\sin \square^\circ}{\square}$$

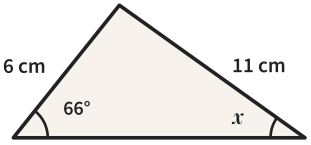
multiply both sides by 4

$\sin x =$ ☐

$x =$ _____

2

Find angle x to 1 decimal place.



each angle over the side opposite it

$$\frac{\sin x}{\square} = \frac{\sin \square^\circ}{\square}$$

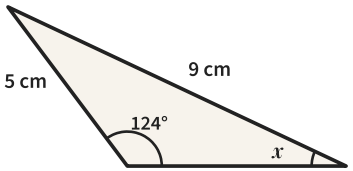
multiply both sides by 6

$\sin x =$ ☐

$x =$ _____

3

Find angle x to 1 decimal place.



each angle over the side opposite it

$$\frac{\sin x}{\square} = \frac{\sin \square^\circ}{\square}$$

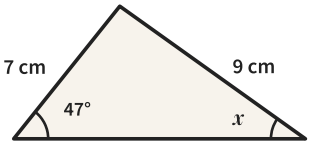
multiply both sides by 5

$\sin x =$ ☐

$x =$ _____

4

Find angle x to 1 decimal place.



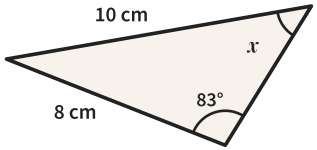
$$\frac{\sin x}{\square} = \frac{\sin \square^\circ}{\square}$$

$\sin x =$ ☐

$x =$ _____

5

Find angle x to 1 decimal place.



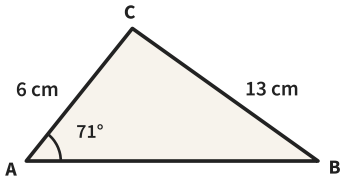
$$\frac{\sin x}{\square} = \frac{\sin \square^\circ}{\square}$$

$\sin x =$ ☐

$x =$ _____

6

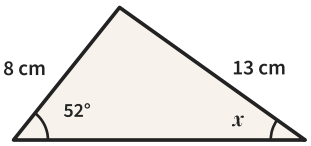
In triangle ABC, AC = 6 cm, BC = 13 cm and angle A = 71°. Find angle B to 1 decimal place.



Angle B _____

7

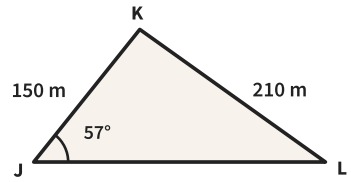
Aisha rounds sin x to 0.48, then gets $x = 28.7°$. Explain her mistake. Then find x to 1 decimal place.



$x =$ _____

8

The corners of a triangular park are J, K and L. JK = 150 m, KL = 210 m and angle KJL = 57°. Find angle JLK to 1 decimal place.

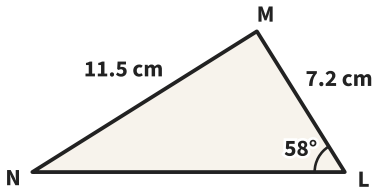


Angle JLK _____

The Sine Rule: Finding an Angle *further practice*

9

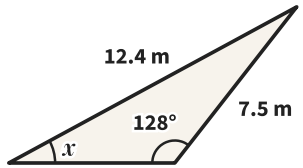
Find angle LNM to 1 decimal place.



Angle LNM _____

10

Find angle x to 1 decimal place.



x = _____

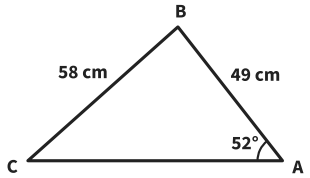
11

In triangle XYZ, angle X = 47°, YZ = 15.2 cm and XZ = 9.6 cm. Find angle Y to 1 decimal place.

Angle Y _____

12

Three tubes of a bike frame make a triangle ABC. AB = 49 cm, BC = 58 cm and angle BAC = 52°. Find angle ACB to 1 decimal place.



Angle ACB _____

13

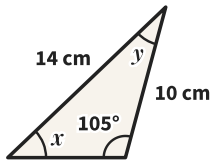
A side of 4 cm is opposite angle x.
A side of 9 cm is opposite an angle of 70°.
Kofi types $\sin^{-1}(9 \times \sin 70° \div 4)$ and his calculator says Math ERROR.

Explain his mistake, then find x to 1 decimal place.

x = _____

14

Find angle x, then angle y. Give both to 1 decimal place.



Answer _____

15

A side of 9 cm is opposite angle x.
A side of 12 cm is opposite an angle of 40°. Is x more or less than 30°?
Show how you know.

Answer _____

16

In triangle DEF, angle D = 104°.
Ruby uses the sine rule and finds angle E = 31.2°. Zara says angle E could be 148.8°, because sin 148.8° = sin 31.2°.
Who is right? Explain.

Answer _____