Sine Rule: Finding an Angle

1

Find angle x to 1 decimal place.

$$\sin x = 0.74$$

$x = \sin^{-1}(0.74)$

$x =$ _____

2

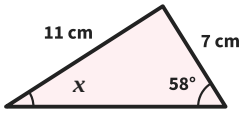
Find angle x to 1 decimal place.

$$\sin x = \frac{2}{7}$$

$x =$ _____

3

Find angle x to 1 decimal place.

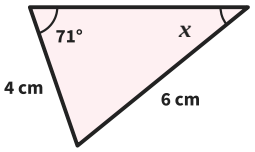


$$\frac{\sin x}{7} = \frac{\sin 58°}{11}$$

$x =$ _____

4

Find angle x to 1 decimal place.

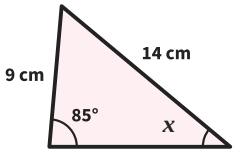


$$\frac{\sin x}{\square} = \frac{\sin \square°}{\square}$$

$x =$ _____

5

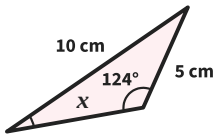
Find angle x to 1 decimal place.



$x =$ _____

6 *Notice the change!*

Find angle x to 1 decimal place.



$x =$ _____

7

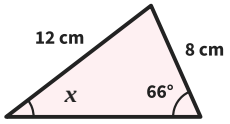
In triangle PQR, PQ = 6 cm, QR = 9 cm and angle P = 98°. Find angle R to 1 decimal place.

R = _____

8

Leo says $x = 66 \times 8 \div 12 = 44°$.

Explain his mistake. Then find x to 1 decimal place.

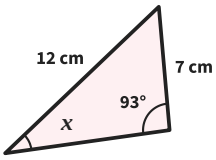


$x =$ _____

Sine Rule: Finding an Angle *further practice*

9

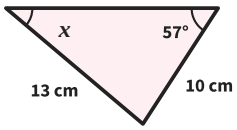
Find angle x to 1 decimal place.



$x =$ _____

10

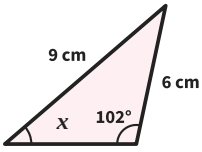
Find angle x to 1 decimal place.



$x =$ _____

11

Find angle x. Then find the third angle of the triangle. Give both to 1 decimal place.



Third angle _____

12

In triangle ABC, AC = 11 cm, BC = 15 cm and angle A = 39°. Find angle B to 1 decimal place.

B = _____

13

A panel on a climbing wall is a triangle. Two of its edges are 2.4 m and 3.2 m long. The angle opposite the 3.2 m edge is 84°. Find the angle opposite the 2.4 m edge, to 1 decimal place.

Answer _____

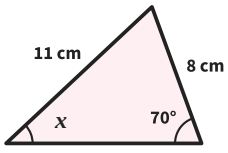
14

A side of 5 cm is opposite angle x. A side of 2.5 cm is opposite an angle of 30°. Show that $x = 90°$.

Answer _____

15

Find the length of the third side, to 1 decimal place.



Answer _____

16

A side of 6 cm is opposite angle x. A side of 9 cm is opposite 75°. Amir works out $9 \times \sin 75° \div 6$ and gets Math ERROR. Explain why. Then find x.

$x =$ _____