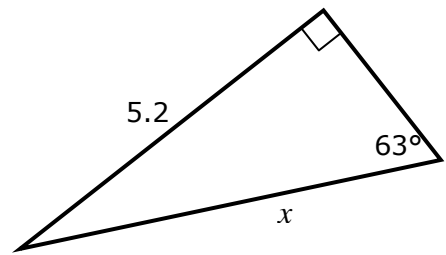


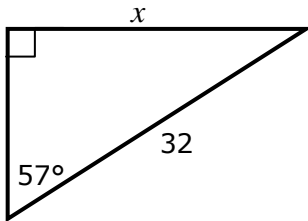
Routine Trigonometry Practice #2

Find the unknown side, x , or angle, θ .

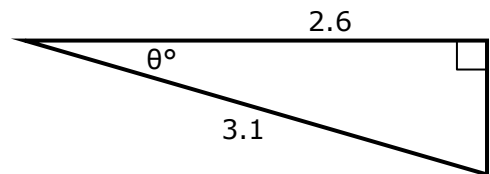
1.



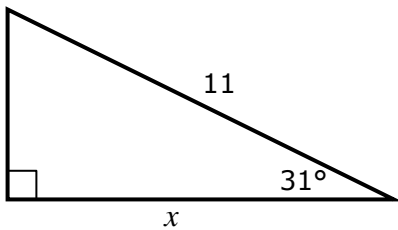
2.



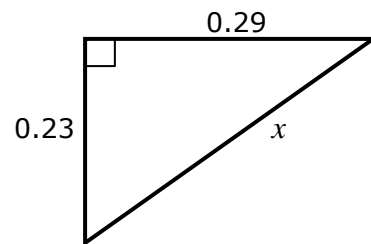
3.



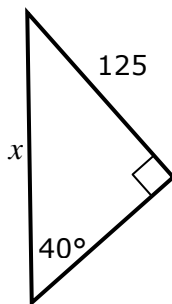
4.



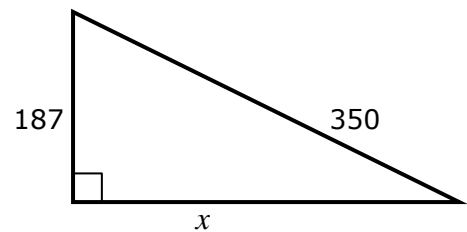
5.



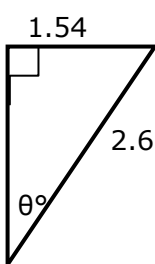
6.



7.



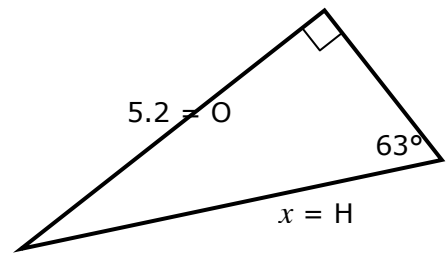
8.



Answers: Routine Trigonometry Practice #2

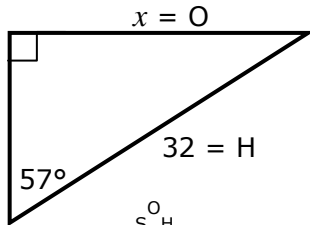
Find the unknown side, x , or angle, θ .

1.



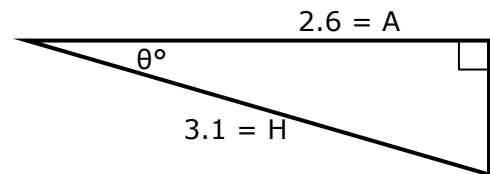
$$\begin{aligned} \frac{O}{H} &= \sin \theta \\ H &= O \div S \\ &= 5.2 \div \sin 63^\circ \\ &= \mathbf{5.84} \end{aligned}$$

2.



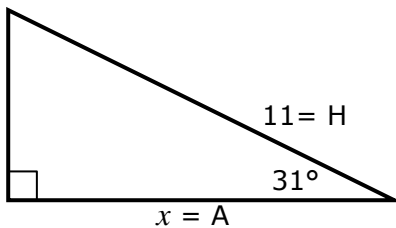
$$\begin{aligned} \frac{O}{H} &= \sin \theta \\ O &= S \times H \\ &= \sin 57^\circ \times 32 \\ &= \mathbf{26.84} \end{aligned}$$

3.



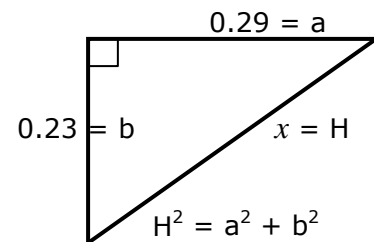
$$\begin{aligned} \frac{A}{H} &= \cos \theta \\ \theta &= \cos^{-1}(2.6 \div 3.1) \\ &= \mathbf{33.0^\circ} \quad (32.9958) \end{aligned}$$

4.



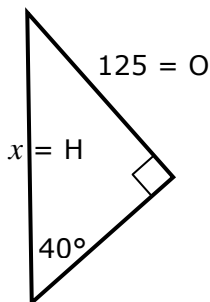
$$\begin{aligned} \frac{A}{H} &= \cos \theta \\ A &= C \times H \\ &= \cos 31^\circ \times 11 \\ &= \mathbf{9.43} \end{aligned}$$

5.



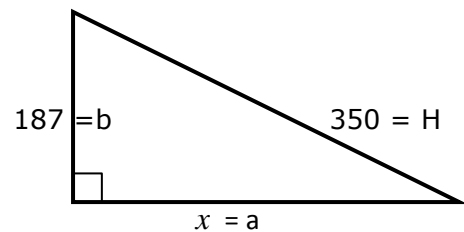
$$\begin{aligned} H^2 &= a^2 + b^2 \\ &= 0.29^2 + 0.23^2 = 0.137 \\ H &= \sqrt{0.137} \\ &= \mathbf{0.370} \end{aligned}$$

6.



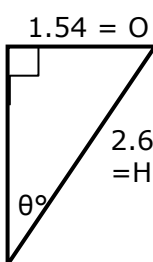
$$\begin{aligned} \frac{O}{H} &= \sin \theta \\ H &= O \div S \\ &= 125 \div \sin 40^\circ \\ &= \mathbf{194.5} \end{aligned}$$

7.



$$\begin{aligned} a^2 &= H^2 - b^2 \\ &= 350^2 - 187^2 = 87531 \\ a &= \sqrt{87531} \\ &= \mathbf{295.9} \end{aligned}$$

8.



$$\begin{aligned} \frac{O}{H} &= \sin \theta \\ S &= O \div H \\ \theta &= \sin^{-1}(1.54 \div 2.6) \\ &= \mathbf{36.3^\circ} \end{aligned}$$