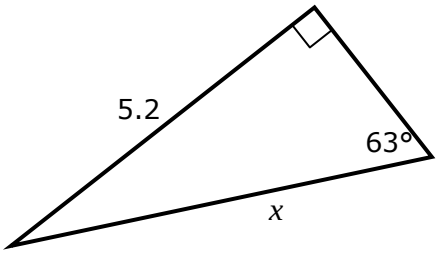
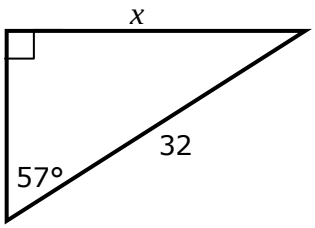
Routine Trigonometry Practice #2

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

1.



2.



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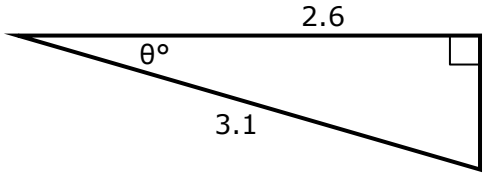

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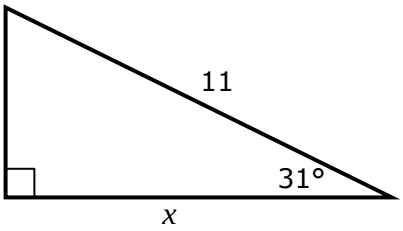

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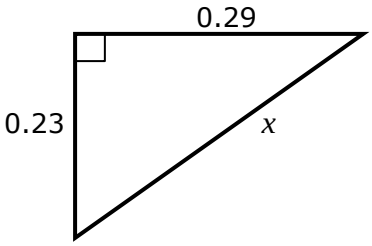

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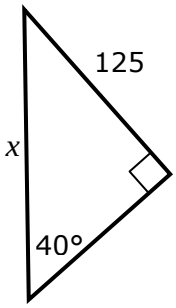

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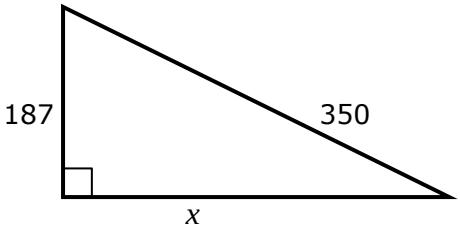

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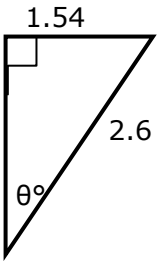
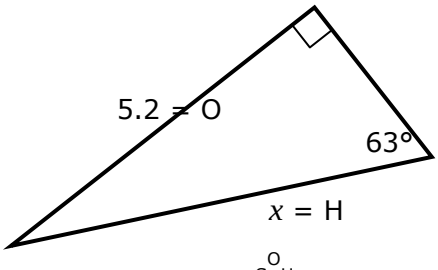


Answers: Routine Trigonometry Practice #2

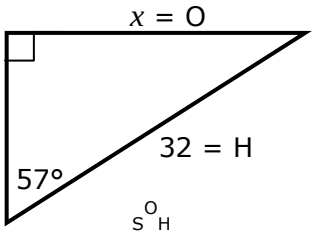
Find the unknown side, x, or angle, θ.

1.



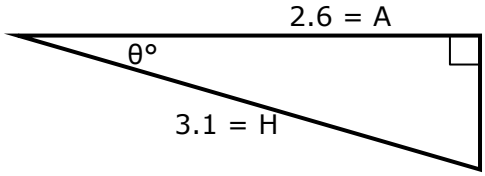
SOH
H = O ÷ S
= 5.2 ÷ sin 63°
= **5.84**

2.



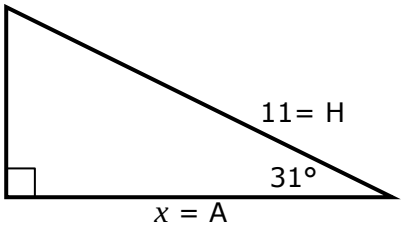
SOH
O = S × H
= sin 57° × 32
= **26.84**

3.



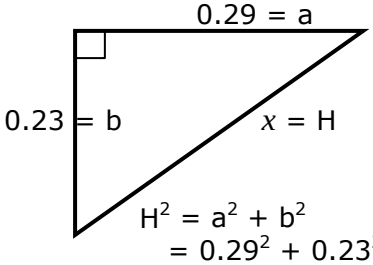
CAH
C = A ÷ H
θ = $\cos^{-1}$ (2.6 ÷ 3.1)
= **33.0°** (32.9958)

4.



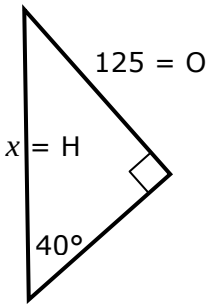
CAH
A = C × H
= cos 31° × 11
= **9.43**

5.



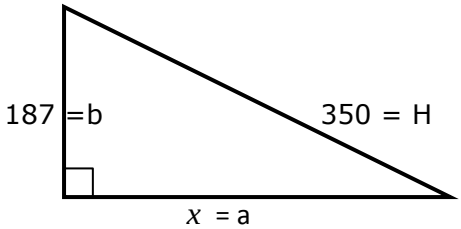
$H^2 = a^2 + b^2$
$= 0.29^2 + 0.23^2$ =0.137
H = √0.137
= **0.370**

6.



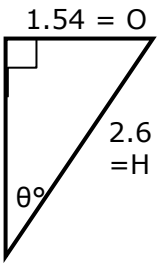
SOH
H = O ÷ S
= 125 ÷ sin 40°
= **194.5**

7.



$a^2 = H^2 - b^2$
$= 350^2 - 187^2$ = 87531
a = √87531
= **295.9**

8.



SOH
S = O ÷ H
θ = $\sin^{-1}$ (1.54 ÷ 2.6)
= **36.3°**