Tues : SOHCAHTOA

Wed Sine Law

Thurs Cosine Law

Fri Word Probs

Quiz

p. 8

a) Hypotenuse : longest side

S

PR

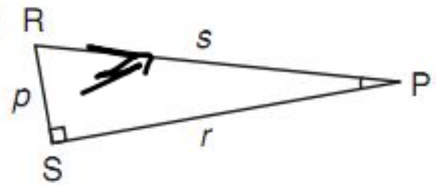
1. For each triangle, name each side in two different ways.

a) Hypotenuse

b) Side opposite the marked angle

c) Side adjacent to the marked angle

i)



b) p

RS

c) r

PS

$\cos B = \frac{BC}{AB}$

c)

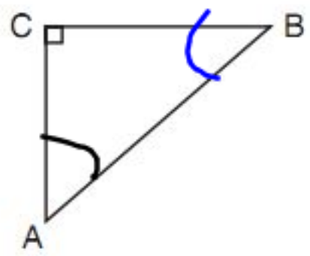
SOHCAHTOA

a) $\tan B = \frac{O}{A}$

$= \frac{AC}{BC}$

2. Write each trigonometric ratio as a ratio of sides.

a) sin A **b)** cos A **c)** cos B **d)** tan B



2a

$\sin A = \frac{Opp}{Hyp}$

$\sin A = \frac{BC}{AB}$

2b. $\cos A = \frac{Adj}{Hyp}$

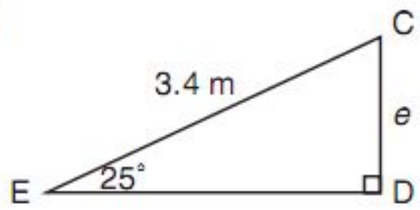
$\cos A = \frac{AC}{AB}$

36 $\tan 13^\circ = \frac{q}{103}$ opp / adj

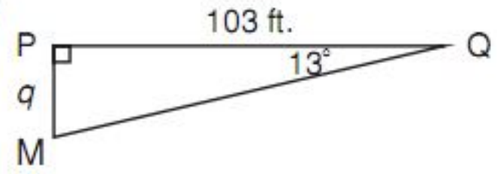
$q = 103 \tan 13$

3. Which primary trigonometric ratio can you use to calculate the length of each indicated side?

a)

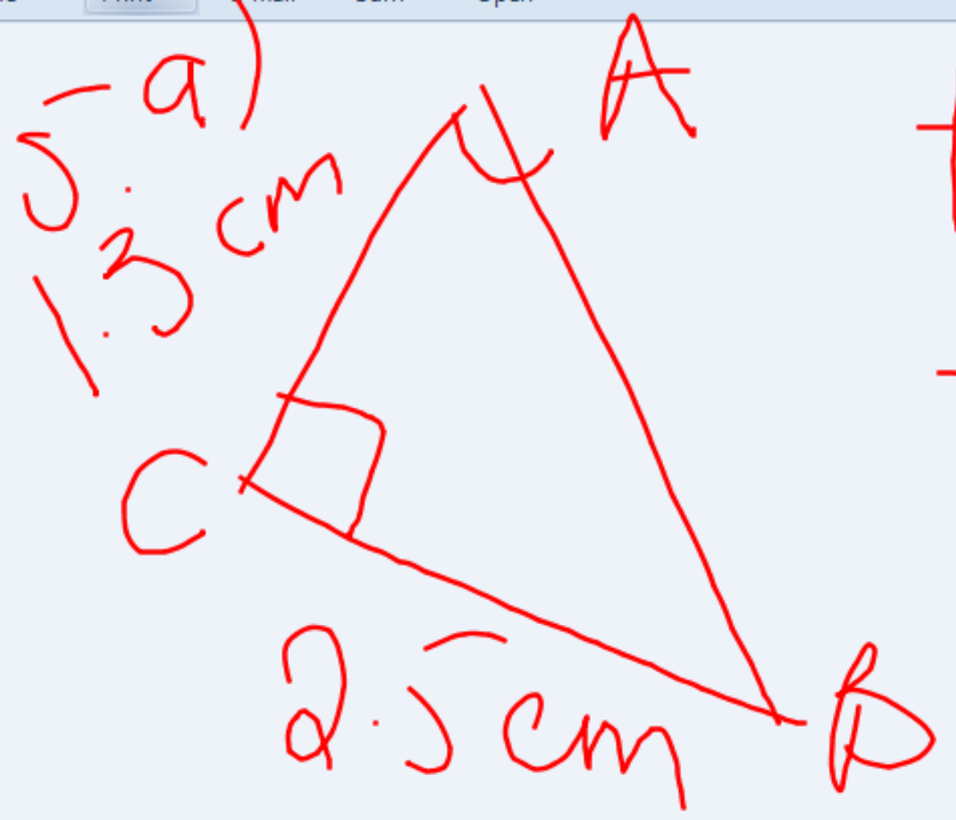


b)



$q = 24$ ft

a)



$$\tan \angle A = \frac{O}{A}$$

$$\tan \angle A = \frac{2.5}{1.3}$$

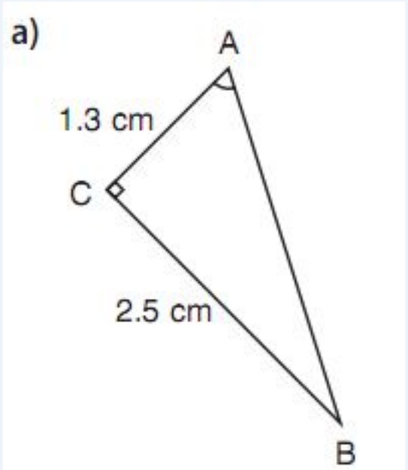
$$\tan \angle A = 1.9230$$

5. For each triangle, determine tan A. Then, determine the measure of ∠A.

$$\tan^{-1} = 62.5^{\circ}$$

6a.

a)



6. Use trigonometric ratios and the Pythagorean Theorem to solve each triangle.

$66 < P = 26^\circ$

$< Q = 90^\circ$

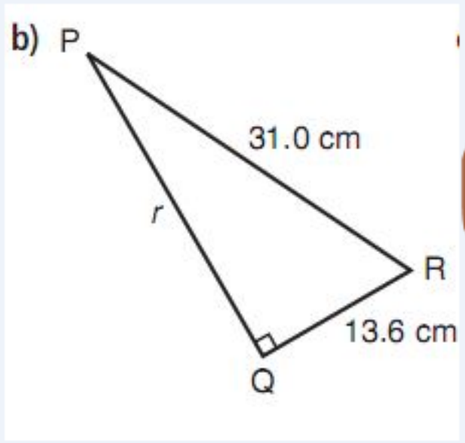
$< R$

$\sin < P = \frac{Opp}{Hyp}$

$\sin P = \frac{13.6}{31}$

$\sin P = 0.4387$

$< P = 26^\circ$



$p = 13.6\text{ cm}$

$q = 31\text{ cm}$

$r = 27.9\text{ cm}$

$a^2 + b^2 = c^2$

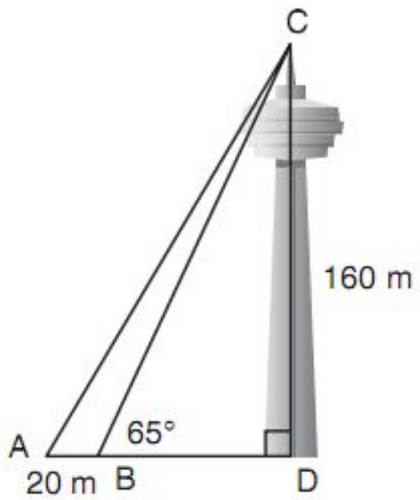
$(13.6)^2 + b^2 = (31.0)^2$

$184.96 + b^2 = 961$

$b^2 = 776.1$

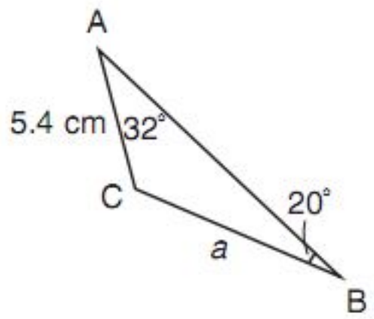
$b = 27.9\text{ cm}$

8. The Skylon Tower in Niagara Falls is about 160 m high. From a certain distance, Frankie measures the angle of elevation to the top of the tower to be 65°. Then he walks another 20 m away from the tower in the same direction and measures the angle of elevation again. Use primary trigonometric ratios to determine the measure of the new angle of elevation.

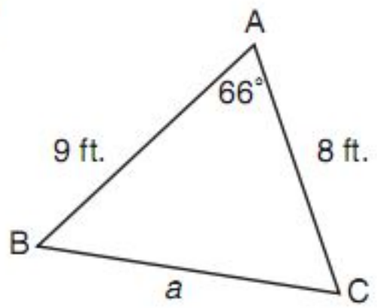


8. Could you use the Sine Law to determine the length of side *a* in each triangle? If not, explain why not.

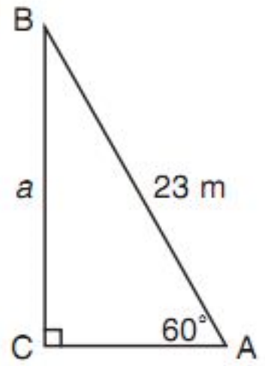
a)

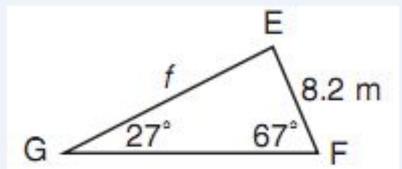


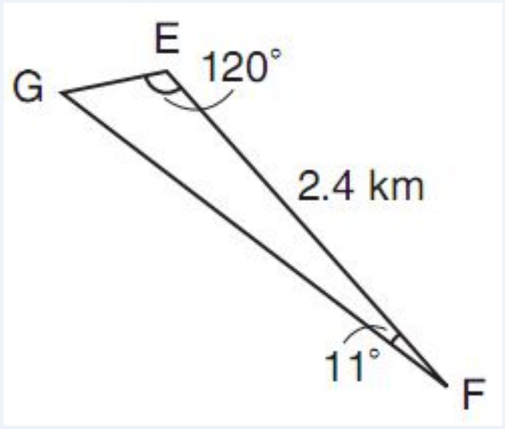
b)

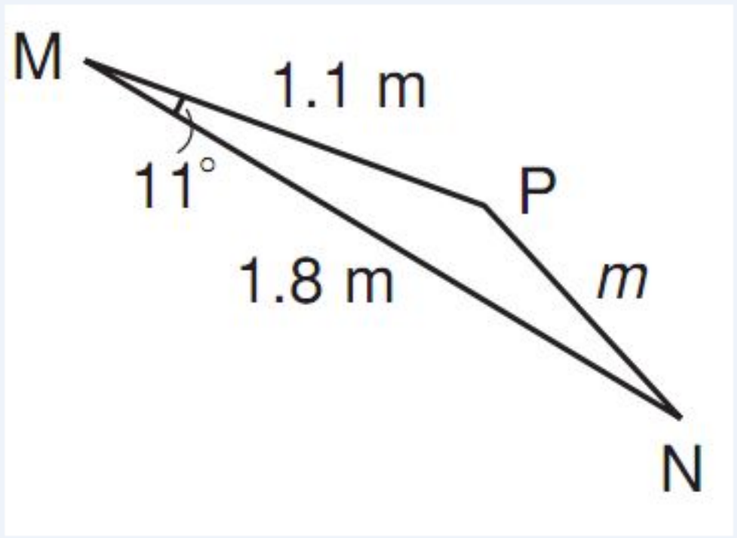


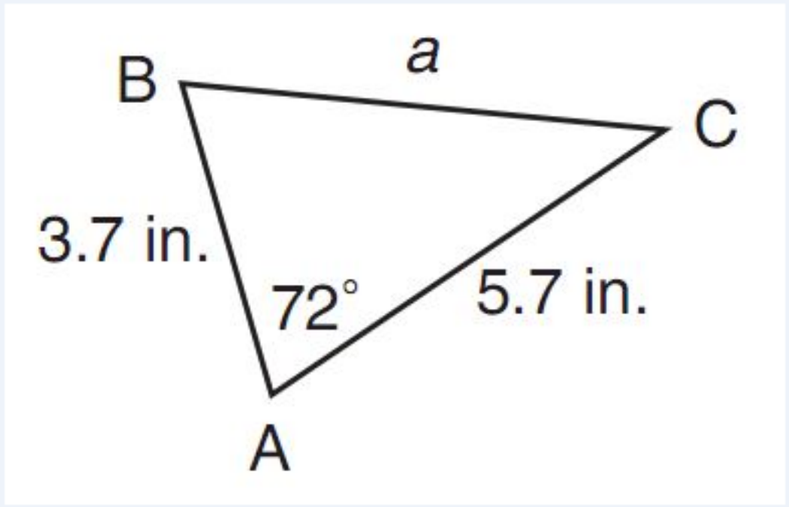
c)

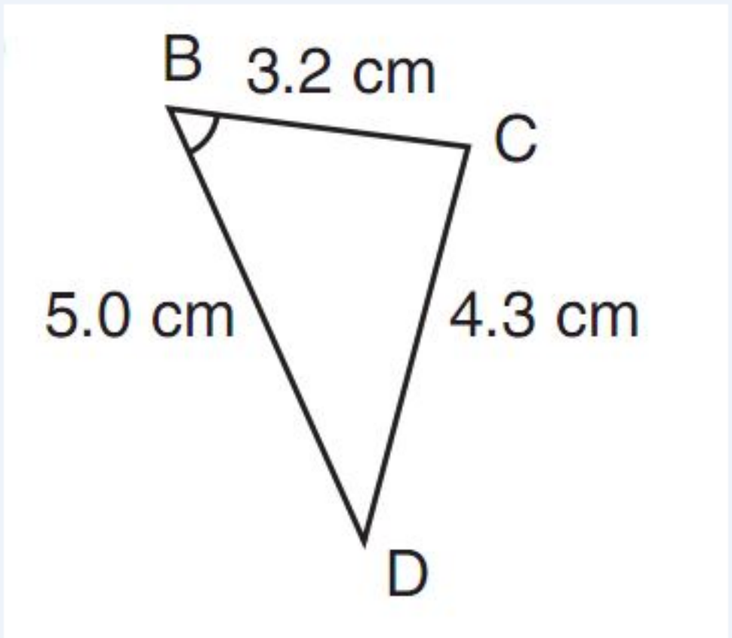




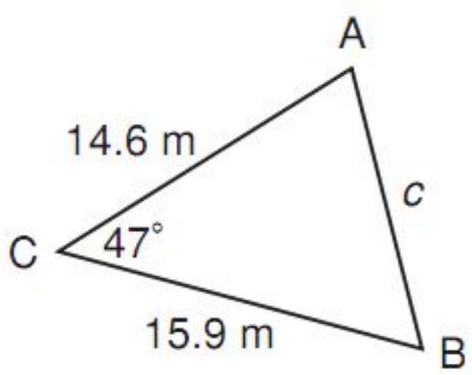




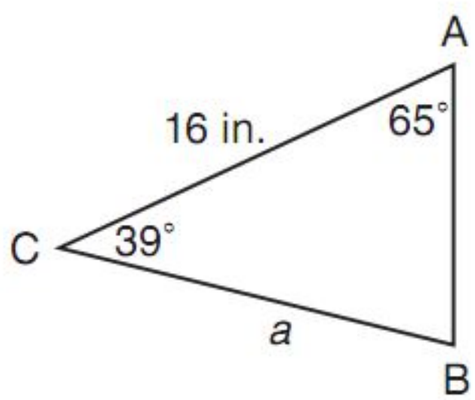




a)



b)



c)