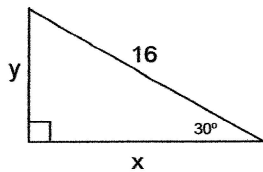


Bellwork Geo Ch 8 Review Friday, April 3, 2020

1. Find the EXACT values of x and y in each Special Right Triangle below. Give answers in simplified radical form with rationalized denominators.

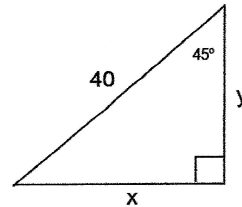
a)



$x =$

$y =$

b)

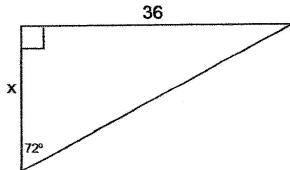


$x =$

$y =$

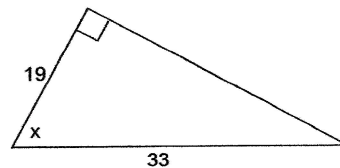
2. Find the value of x in each triangle to the nearest hundredth.

a)



$x =$

b)



$x =$

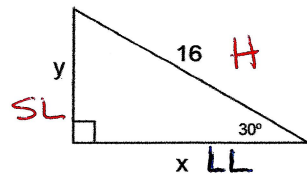
3. You are flying a kite on a 300 foot long string in a strong wind. The kite is pulling tightly on the string. If you see the kite with an angle of elevation of 63° find the height of the kite to the nearest hundredth of a foot.

4. The three numbers below represent the sides of a triangle. Is this triangle Right, Obtuse, or Acute?

33, 56, 67

1. Find the EXACT values of x and y in each Special Right Triangle below. Give answers in simplified radical form with rationalized denominators.

a)

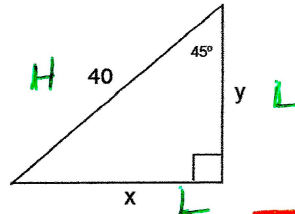


$x = 8\sqrt{3}$ $y = 8$

$SL = H \div 2 = 16 \div 2 = 8 = y$

$LL = SL \cdot \sqrt{3} = 8 \cdot \sqrt{3} = 8\sqrt{3} = x$

b)



$x = 20\sqrt{2}$ $y = 20\sqrt{2}$

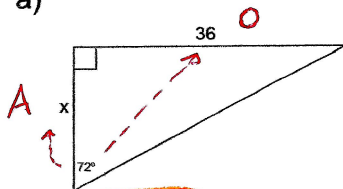
Legs are \cong

$x = y = 20\sqrt{2}$

$Leg = \frac{H}{\sqrt{2}} = \frac{40}{\sqrt{2}} \cdot \frac{\sqrt{2}}{\sqrt{2}}$
 $= \frac{40\sqrt{2}}{2}$
 $Leg = 20\sqrt{2}$

2. Find the value of x in each triangle to the nearest hundredth.

a)



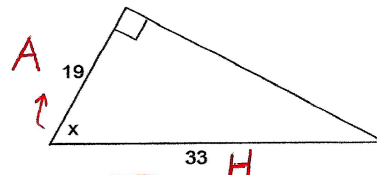
$x = 11.70$

SOHCAHTOA

$\tan 72^\circ = \frac{36}{x}$

$x = \frac{(36)(1)}{\tan 72^\circ} = 11.70$

b)



$x = 54.85^\circ$

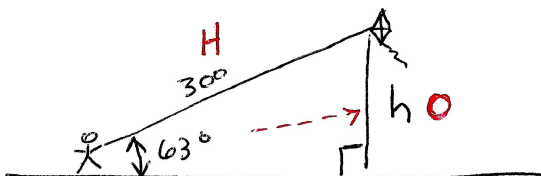
SOHCAHTOA

$\cos X = \frac{19}{33}$

$X = \cos^{-1}\left(\frac{19}{33}\right)$

$X = 54.85^\circ$

3. You are flying a kite on a 300 foot long string in a strong wind. The kite is pulling tightly on the string. If you see the kite with an angle of elevation of 63° find the height of the kite to the nearest hundredth of a foot.



SOHCAHTOA

$\sin 63^\circ = \frac{h}{300}$

$h = 300 \sin 63^\circ$

$h = 267.30 \text{ ft}$

4. The three numbers below represent the sides of a triangle. Is this triangle Right, Obtuse, or Acute?

33, 56, 67
 a, b, c

$c^2 = 67^2 = 4489$

$a^2 + b^2 = 33^2 + 56^2 = 4225$

$4489 > 4225$
 $c^2 > a^2 + b^2$

→ OBTUSE \triangle