Circle P is dilated to for circle P'. Which statement is ALWAYS true?

A. The radius of the circle P is equal to the radius of circle P'

B. The length of any chord in circle P is greater than the length of any chord in circle P' or smaller

C. Diameter of circle P is greater than the diameter of circle P'

D. The ratio of the diameter to the circumference is the same for both circles.

$\frac{C}{d} = \frac{\pi d}{d} \pi$

Trig Ratios

1. $\sin A =$ $\frac{2}{5}$

2. $\cos A =$ $\frac{\sqrt{21}}{5}$

3. $\tan A =$ $\frac{2}{\sqrt{21}}$ $\cdot \frac{\sqrt{21}}{\sqrt{21}}$ $= \frac{2\sqrt{21}}{21}$

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

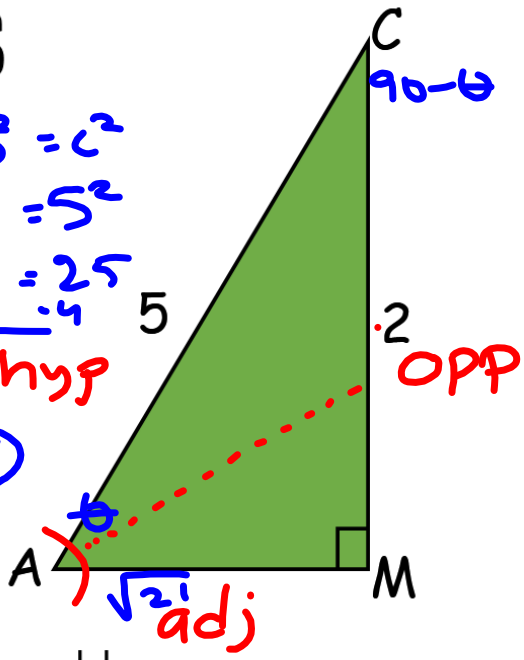
$2^2 + b^2 = 5^2$

$4 + b^2 = 25$

$-4 \quad -4$

$\sqrt{b^2} = \sqrt{21}$

$b = \sqrt{21}$



4. If C = 20°, then cos C is equal to:

A. sin 70 **B.** cos 70 **C.** tan 70

Complement !!!

Using Trig to Find Missing Angles and Missing Sides

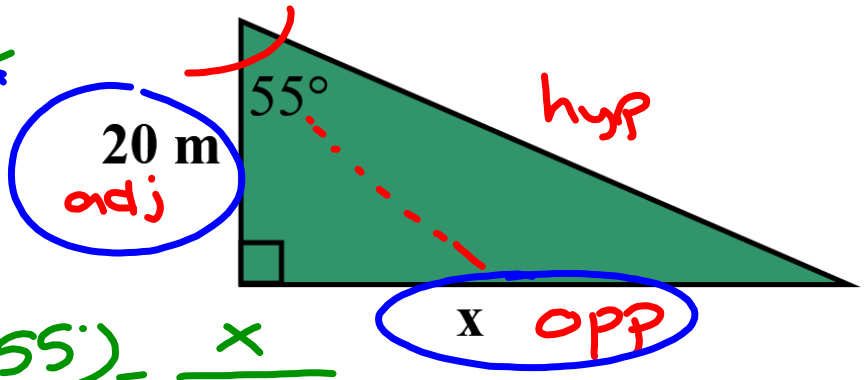
Finding a side.

(Figuring out which ratio to use and getting to use a trig button.)

1. Label yo' triangle!
2. Circle yo' key players!
3. Trig & Solve!

Ex: 1 Figure out which ratio to use. Find x. Round to the nearest tenth.

SOHCAHTOA

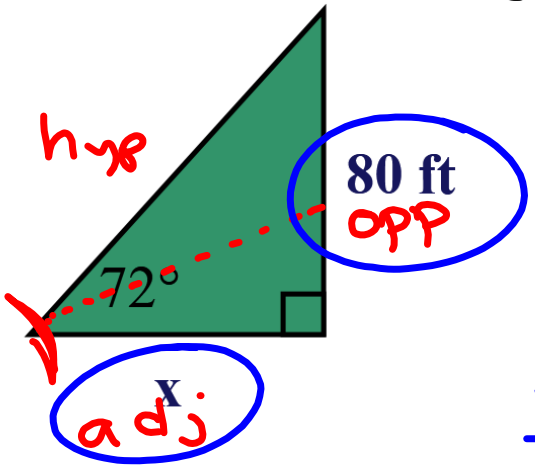


$$\frac{\tan(55^\circ)}{1} = \frac{x}{20}$$

$$x = 20 \cdot \tan(55^\circ)$$

$$x = 28.6 \text{ m}$$

Ex. 2: Find the missing side. Round to the nearest tenth.



$SOH\,CAH\,TOA$

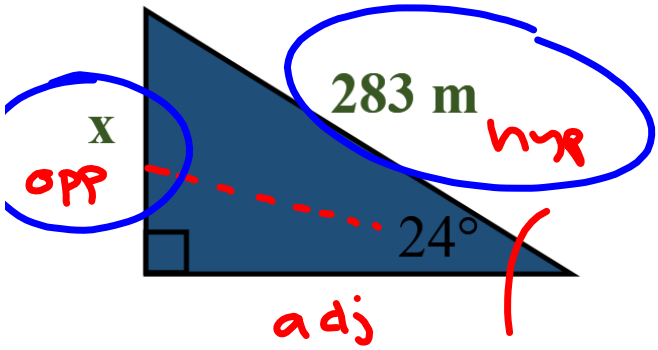
$\tan(72^\circ) = \frac{80}{x}$

$80 = x \cdot \tan(72)$

$\frac{80}{\tan(72)} = \frac{x \cdot \tan(72)}{\tan(72)}$

$x = 25.99 \approx 26.0$

Ex: 3 Find the missing side. Round to the nearest tenth.



opp
hyp
adj

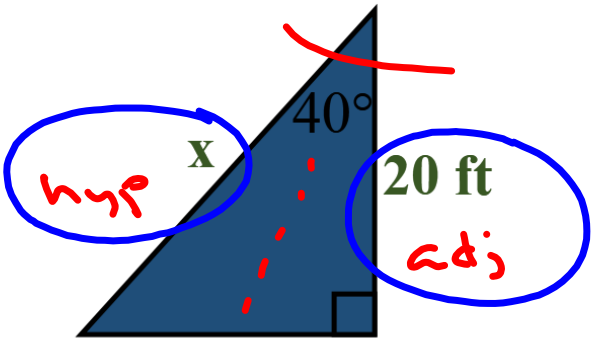
SOHCAHTOA

$\sin(24°) = \frac{x}{283}$

$283 \cdot \sin(24) = x$

$x = 115.1$ m

Ex: 4 Find the missing side. Round to the nearest tenth.



: swap

SOH CAH TOA

$\cos(40°) = \frac{20}{x}$

$x = \frac{20}{\cos(40)}$

$x = 26.1$ ft

$$\sin(30^\circ) = \frac{8}{x}$$

$$x = \frac{8}{\sin(30^\circ)}$$

swap x

$$\sin(30^\circ) = \frac{x}{8}$$

$$x = 8\sin(30^\circ)$$

multiply

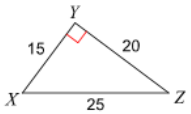
Geometry Name_____ ID: 1

Right Triangle Trig

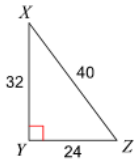
Date_____ Period____

Find the value of each trigonometric ratio. Reduce the fraction.

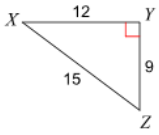
1) tan X



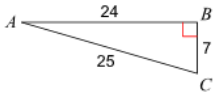
2) sin Z



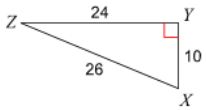
3) cos Z



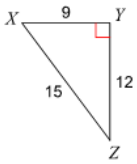
4) cos A



5) sin Z



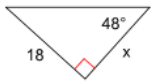
6) tan X



State which trig function you should use, set up the problem, and then fnd the missing side. Round to the nearest tenth.

7)

8)



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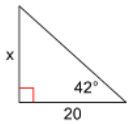

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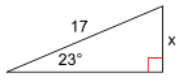

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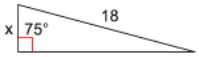
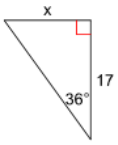
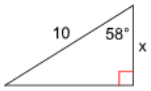
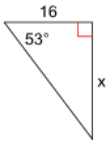
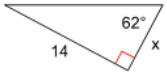
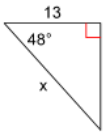
12) 

13) 

14) 

15) 

16) 

17) 

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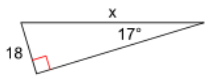
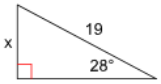
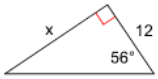
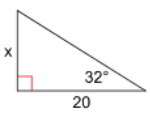
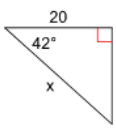
19) 

20) 

21) 

22) 

23) 

24) 

Answers to Right Triangle Trig (ID: 1)

1) $\frac{4}{3}$	2) $\frac{4}{5}$	3) $\frac{3}{5}$	4) $\frac{24}{25}$
5) $\frac{5}{13}$	6) $\frac{4}{3}$	7) 15.2	8) 16.2
9) 18.0	10) 6.6	11) 23.3	12) 4.7
13) 12.4	14) 5.3	15) 21.2	16) 7.4
17) 19.4	18) 26.1	19) 16.5	20) 61.6
21) 8.9	22) 17.8	23) 12.5	24) 26.9