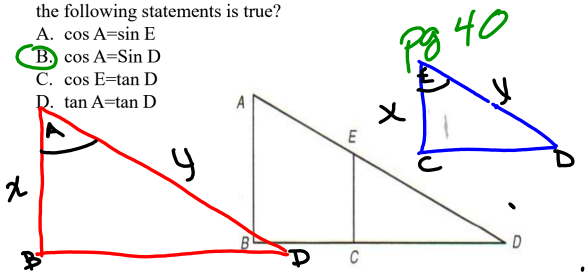
Using the figure at the right, determine which of the following statements is true?

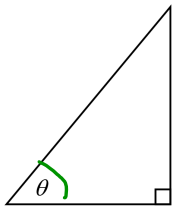
A. cos A=sin E
B. cos A=Sin D
C. cos E=tan D
D. tan A=tan D

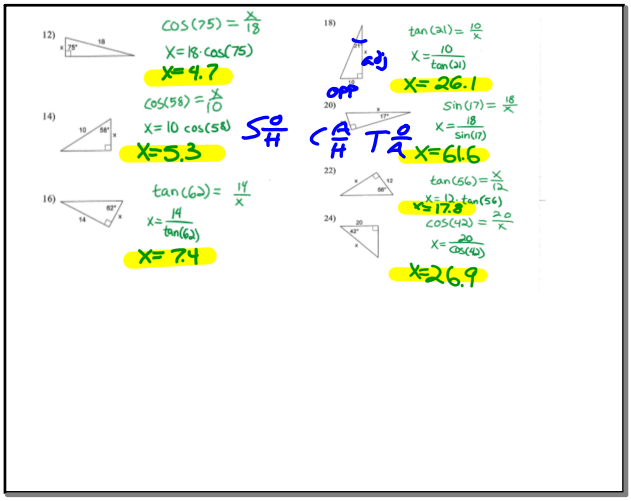


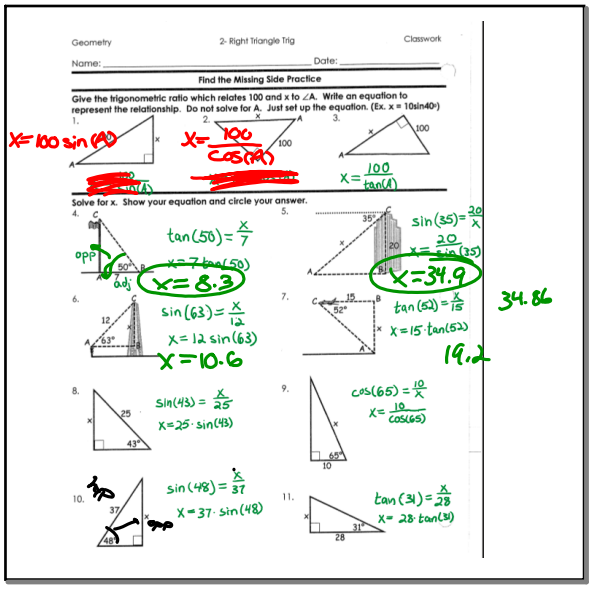
$\sin(\theta) = \frac{opp}{hyp}$

$\cos(\theta) = \frac{adj}{hyp}$

$\tan(\theta) = \frac{opp}{adj}$







Finding a missing angle.

(Figuring out which ratio to use and an inverse trig button.)

sin⁻¹

sin

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

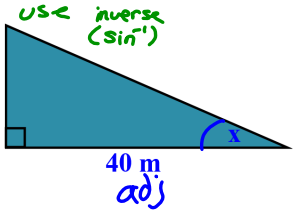
Solving for an angle use inverse (sin⁻¹)

$\tan(x) = \frac{20}{40}$ (20 m = opp, 40 m = adj)

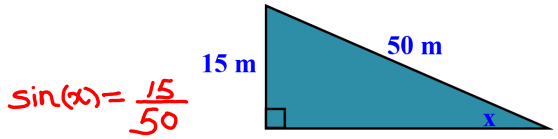
$x = \arctan\left(\frac{20}{40}\right)$

$x = \tan^{-1}\left(\frac{20}{40}\right)$

$x = 26.6°$



Ex: 2 Figure out which ratio to use. Find x. Round to the nearest tenth.

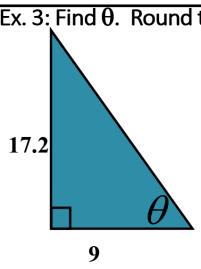


$\sin(x) = \frac{15}{50}$

$x = \sin^{-1}\left(\frac{15}{50}\right)$

$x = 17.5°$

Ex. 3: Find θ. Round to the nearest degree.

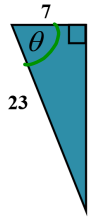


$\tan(\theta) = \frac{17.2}{9}$

$\tan^{-1}\left(\frac{17.2}{9}\right) = x$

$62° = x$

Ex. 4: Find θ. Round to the nearest degree.

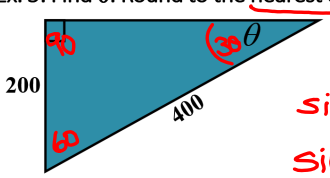


$\cos(\theta) = \frac{7}{23}$

$\cos^{-1}\left(\frac{7}{23}\right) = \theta$

$72° = \theta$

Ex. 5: Find θ. Round to the nearest degree.



$\sin(\theta) = \frac{200}{400}$

$\sin^{-1}\left(\frac{200}{400}\right) = \theta$

$30° = \theta$

Practice Pg 42 odds

1. 36°
3. 64°
5. 22°
7. 47°
9. 36°
11. 42°

Homework

Pg 43 and 44