

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. $\tan A = \tan D$

Handwritten notes: "PB 40" and "x" and "y" labels on the diagram.

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

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

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

12) $\cos(75^\circ) = \frac{x}{13}$
 $x = 13 \cdot \cos(75^\circ)$
 $x = 4.7$

14) $\cos(56^\circ) = \frac{x}{10}$
 $x = 10 \cos(56^\circ)$
 $x = 5.3$

16) $\tan(62^\circ) = \frac{14}{x}$
 $x = \frac{14}{\tan(62^\circ)}$
 $x = 7.4$

18) $\tan(31^\circ) = \frac{10}{x}$
 $x = \frac{10}{\tan(31^\circ)}$
 $x = 26.1$

20) $\sin(17^\circ) = \frac{18}{x}$
 $x = \frac{18}{\sin(17^\circ)}$
 $x = 61.6$

22) $\tan(56^\circ) = \frac{x}{12}$
 $x = 12 \cdot \tan(56^\circ)$
 $x = 17.8$

24) $\cos(42^\circ) = \frac{20}{x}$
 $x = \frac{20}{\cos(42^\circ)}$
 $x = 26.9$

Handwritten notes: "SOH CAHTOA" and "opp", "adj", "hyp" labels.

Geometry 2- Right Triangle Trig Date: _____

Name: _____

Find the Missing Side Practice

Give the trigonometric ratio which relates 100 and x to $\angle A$. Write an equation to represent the relationship. Do not solve for A. Just set up the equation. (Ex. $x = 10 \sin(40^\circ)$)

1. $x = 100 \sin(A)$

2. $x = \frac{100}{\cos(A)}$

3. $x = \frac{100}{\tan(A)}$

Solve for x. Show your equation and circle your answer.

4. $\tan(50^\circ) = \frac{x}{7}$
 $x = 7 \tan(50^\circ)$
 $x = 8.3$

5. $\sin(35^\circ) = \frac{20}{x}$
 $x = \frac{20}{\sin(35^\circ)}$
 $x = 34.9$

6. $\sin(63^\circ) = \frac{x}{12}$
 $x = 12 \sin(63^\circ)$
 $x = 10.6$

7. $\tan(52^\circ) = \frac{x}{15}$
 $x = 15 \tan(52^\circ)$
 $x = 19.2$

8. $\sin(43^\circ) = \frac{x}{25}$
 $x = 25 \cdot \sin(43^\circ)$

9. $\cos(65^\circ) = \frac{10}{x}$
 $x = \frac{10}{\cos(65^\circ)}$

10. $\sin(48^\circ) = \frac{x}{37}$
 $x = 37 \cdot \sin(48^\circ)$

11. $\tan(31^\circ) = \frac{x}{28}$
 $x = 28 \tan(31^\circ)$

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.

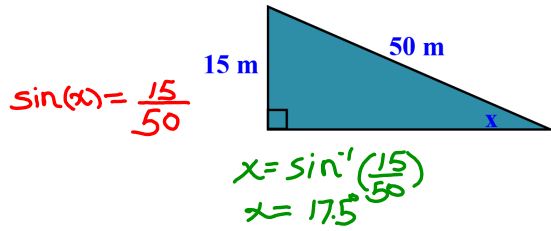
Solving for an angle use inverse (sin⁻¹)

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

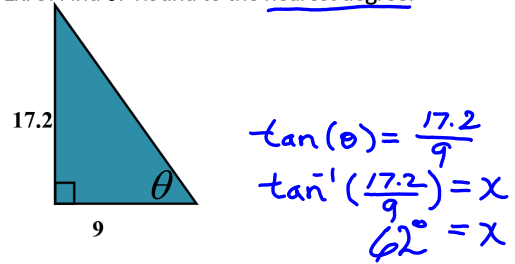
$x = \tan^{-1}(\frac{20}{40})$

$x = 26.6^\circ$

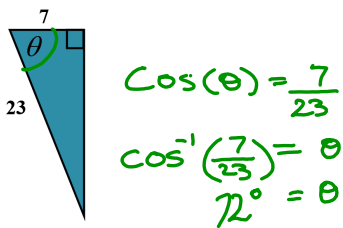
Ex: 2 Figure out which ratio to use. Find x . Round to the nearest tenth.



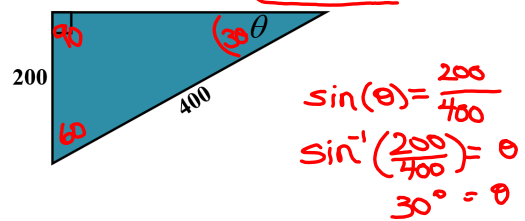
Ex. 3: Find θ . Round to the nearest degree.



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



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



Practice Pg 42 odds

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

Homework
Pg 43 and 44