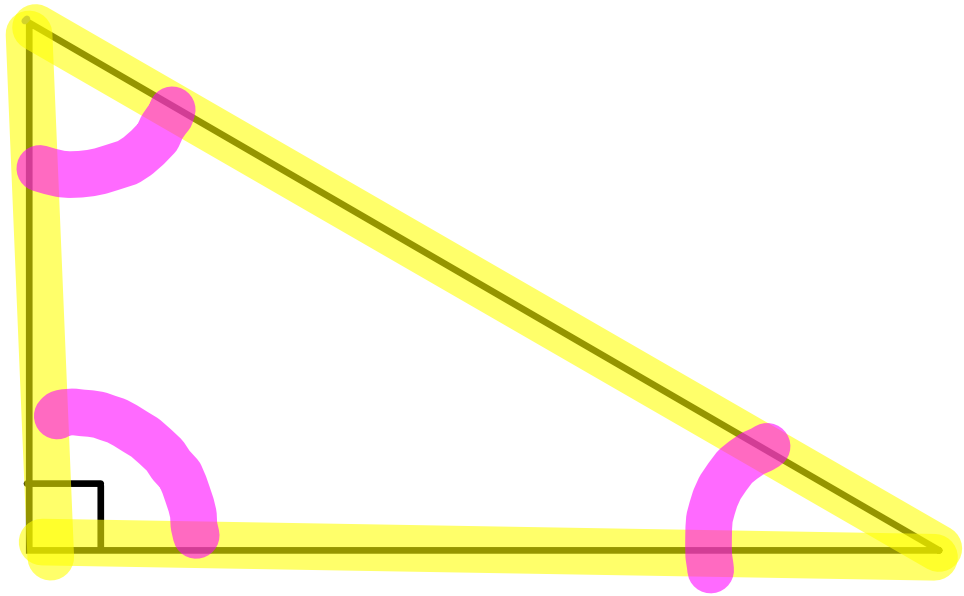
TODAY'S AGENDA: Week of April 16-22

- Work on Khan Academy Mission:
- Whole Class Lesson
- Today's Objective:
- Trigonometric Ratios in Right Triangles

- Standards:
- G.SRT.C.8:
- Use sine, cosine, tangent, the Pythagorean Theorem and properties of special right triangles to solve right triangles in applied problems.

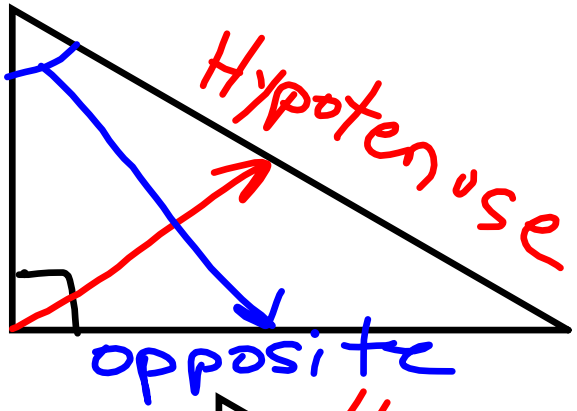
Trigonometric Ratios: SOH CAH TOA

- We use trig ratios to find:
  1. The lengths of sides in right triangles
  2. The measure of an angle in a right triangle

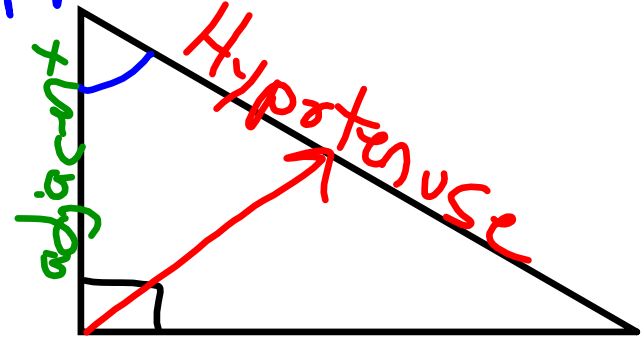


SOH CAH TOA:

What do you have?
What are you looking for?

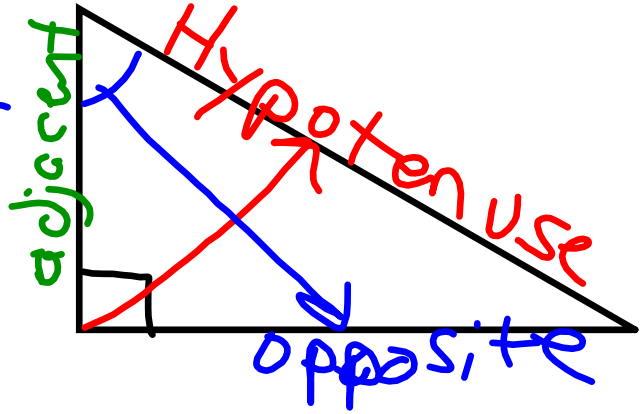


SINe: $\frac{\text{Opposite}}{\text{hypotenuse}}$

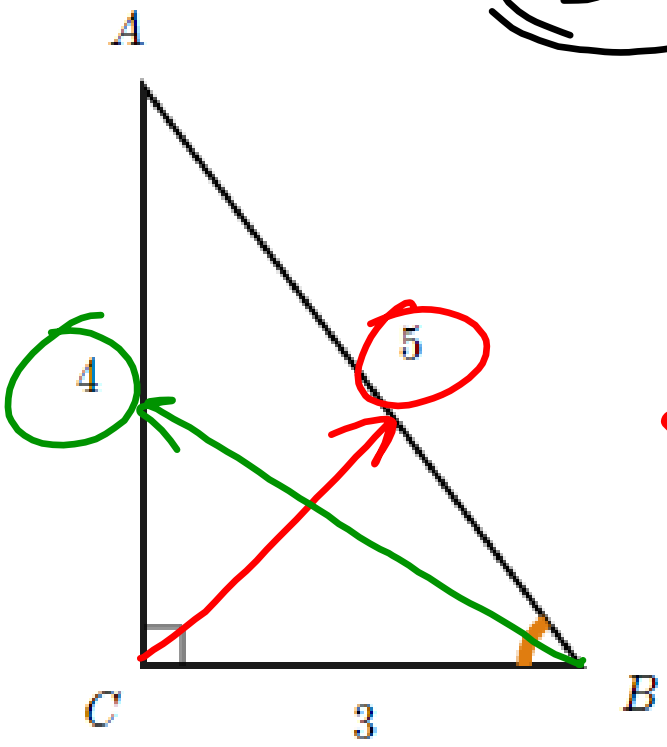


COSine: $\frac{\text{adjacent}}{\text{hypotenuse}}$

TANgent: $\frac{\text{opposite}}{\text{adjacent}}$

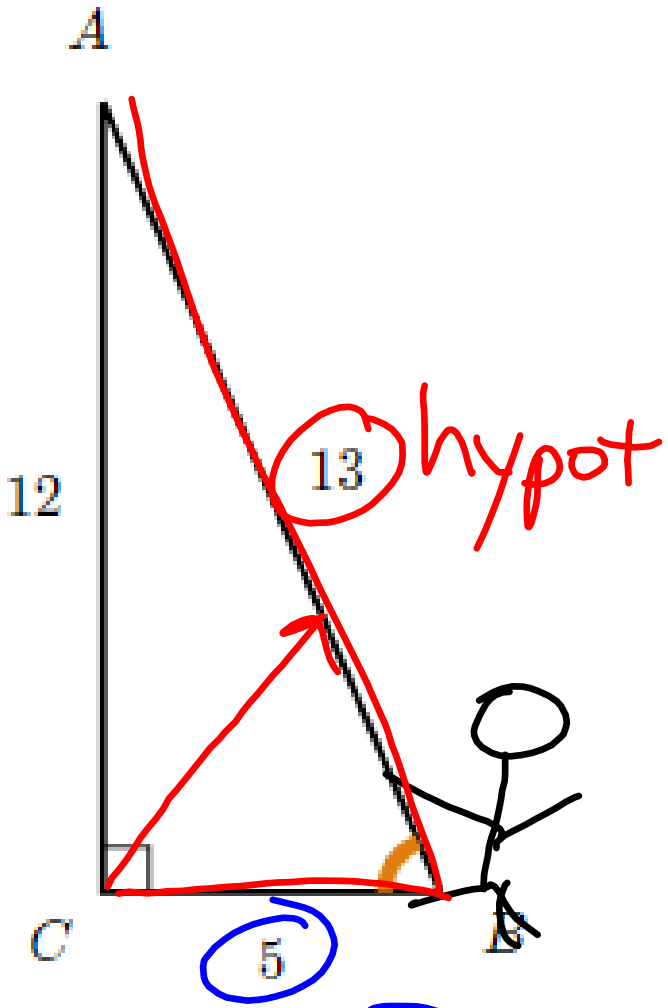


Soh Cah Toa



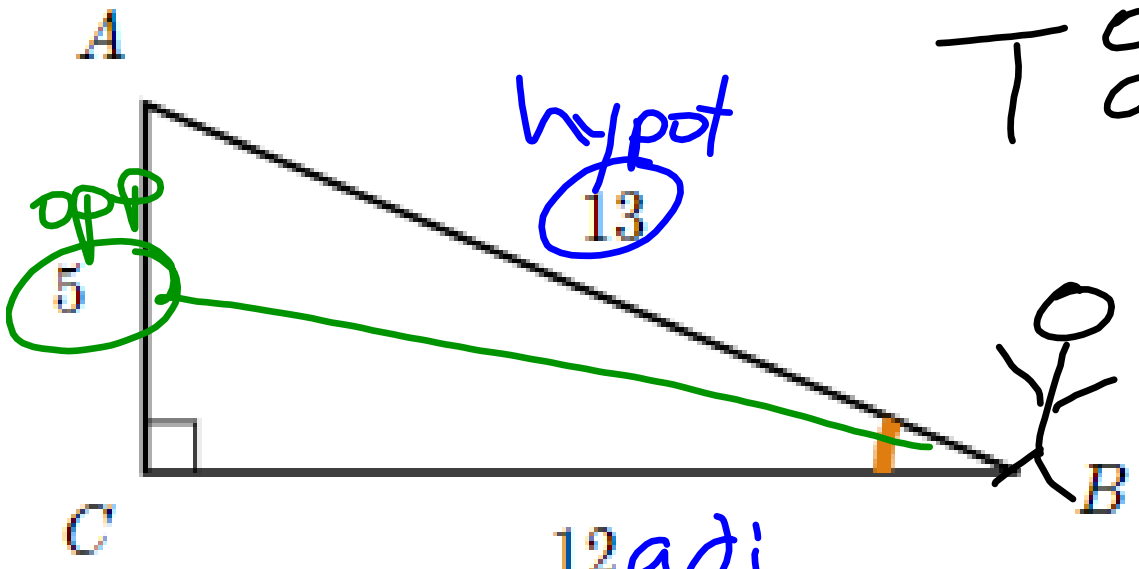
$\sin B = \frac{4}{5}$

Find $\sin(\angle B)$. $\frac{4}{5}$



C a h

Find $\cos(\angle B)$. $\frac{5}{13}$



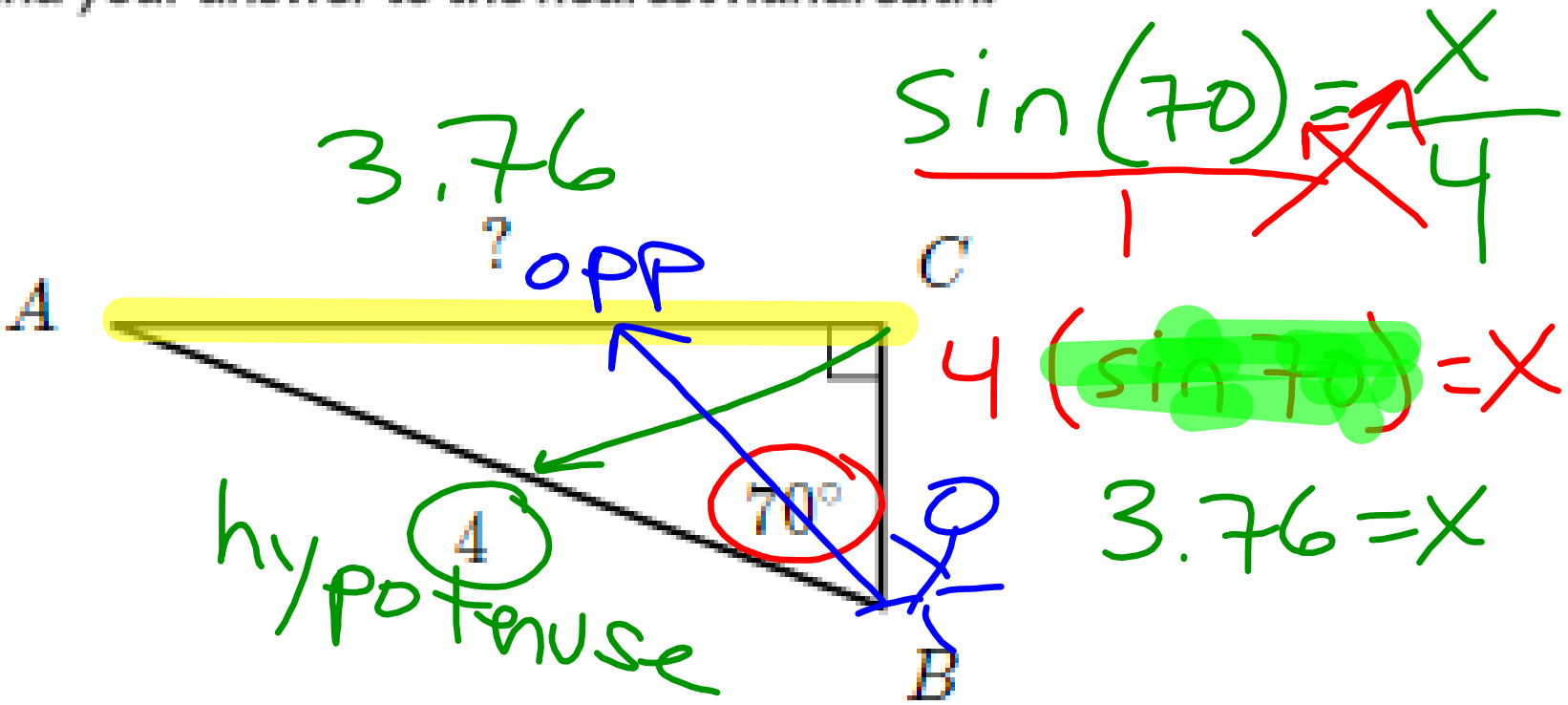
TOA

Find $\tan(\angle B)$. $\frac{5}{12}$

$AC =$ ☐

SOH CAH TOA

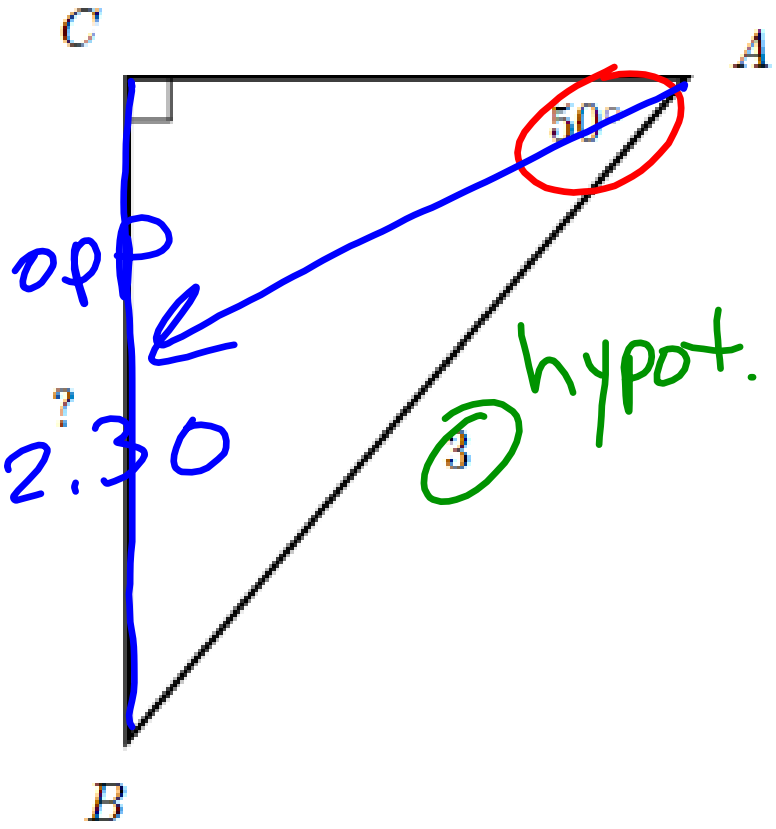
Round your answer to the nearest hundredth.



$BC =$ ☐

Round your answer to the nearest hundredth

SOH CAH TOA



opp

? 2.30

hypot.

$\frac{\sin(50)}{1} = \frac{X}{3}$

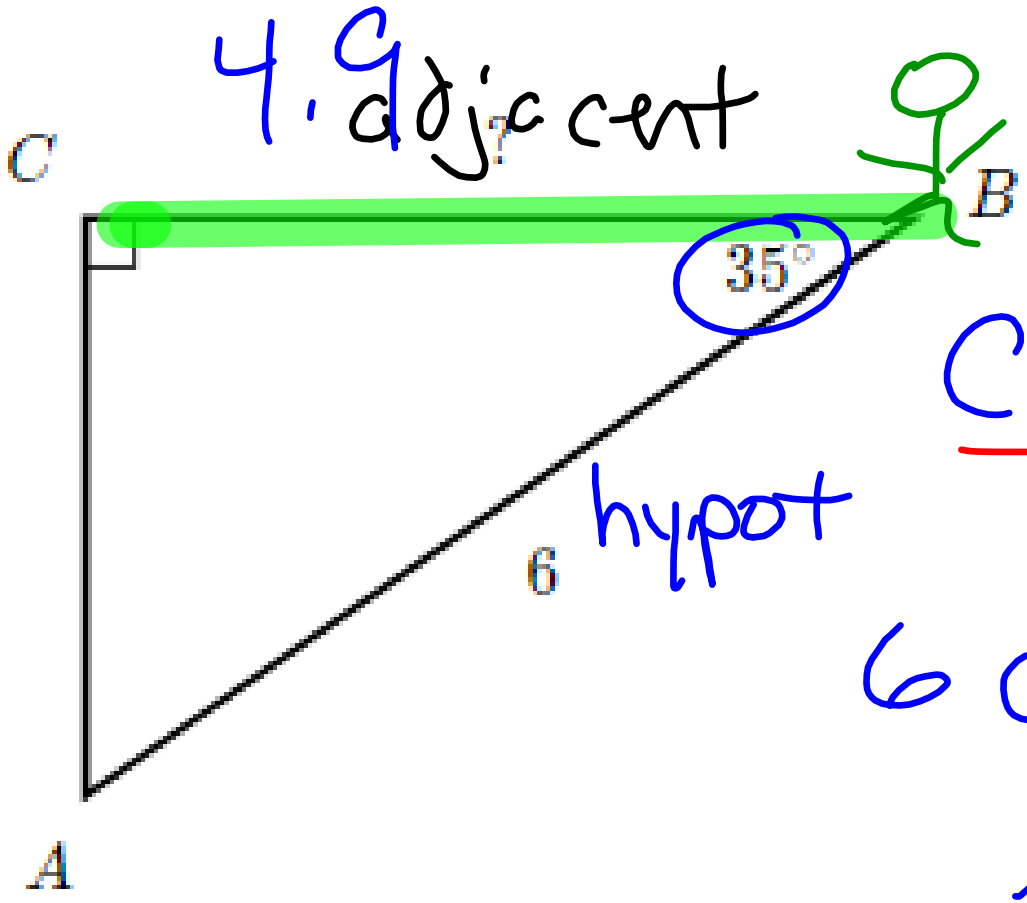
$3\sin(50) = X$

$X = 2.30$

$BC =$ ☐

SOH CAH TOA

Round your answer to the nearest hundredth.



4.9 adjacent

hypot

$\frac{\cos(35)}{1} = \frac{x}{6}$

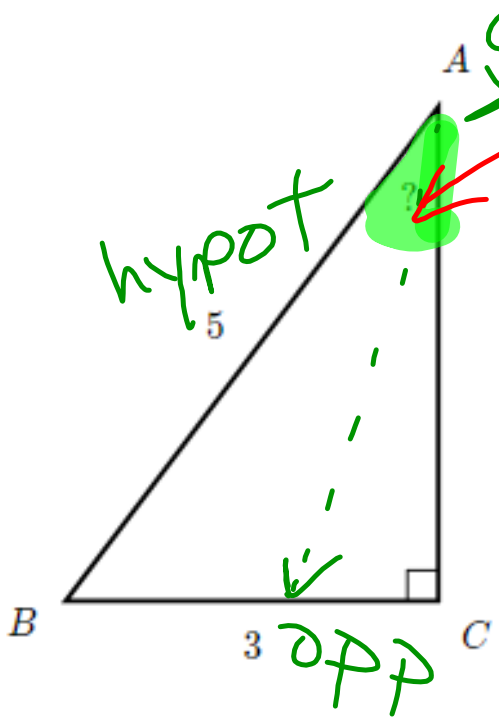
$6\cos(35) = x$

$x = 4.9$

$\angle A =$ ____°

Round your answer to the nearest hundredth.

SOH CAH TOA



$\sin(x) = \frac{3}{5}$

$\frac{5\sin(x)}{5} = \frac{3}{5}$

$\sin(x) = \frac{3}{5}$

36.9°

In calc, 2nd sin 3 ÷ 5

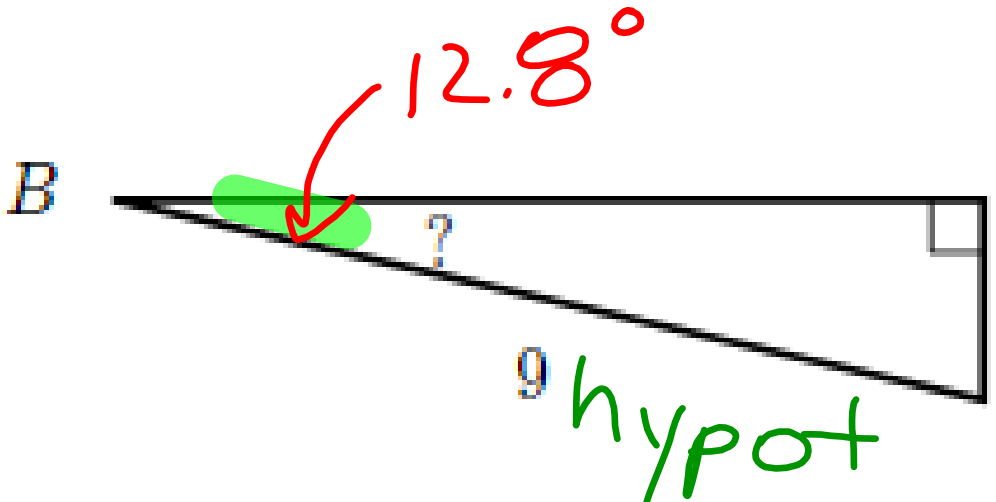
$$\frac{5}{5}x = \frac{3}{5}$$

$$\sin x = \frac{3}{5}$$

$\angle B =$ ____ °

SOH CAH TOA

Round your answer to the nearest hundredth.



opp

hypot

$\sin x = \frac{2}{9}$

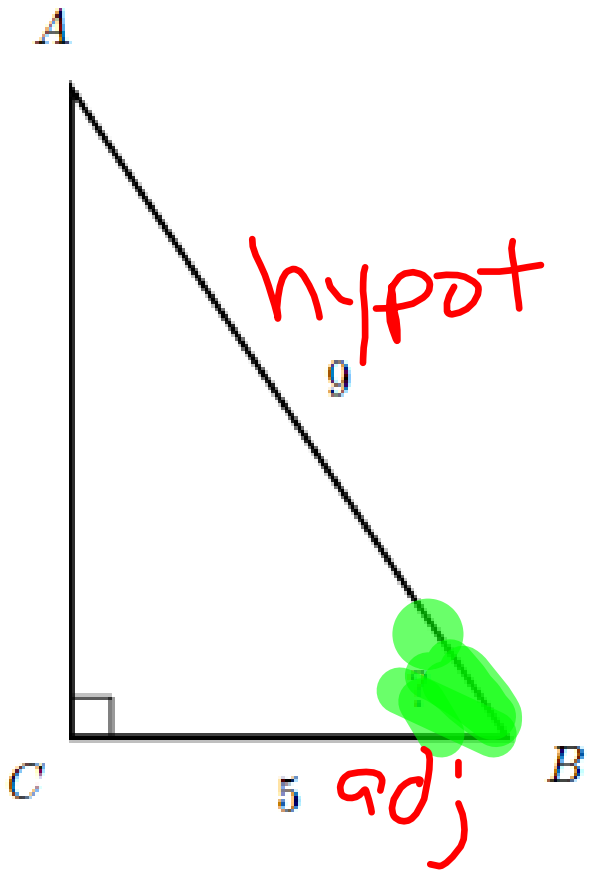
2nd sin 2 ÷ 9

$= 12.8°$

$\angle B =$ ____ °

SOH CAH TOA

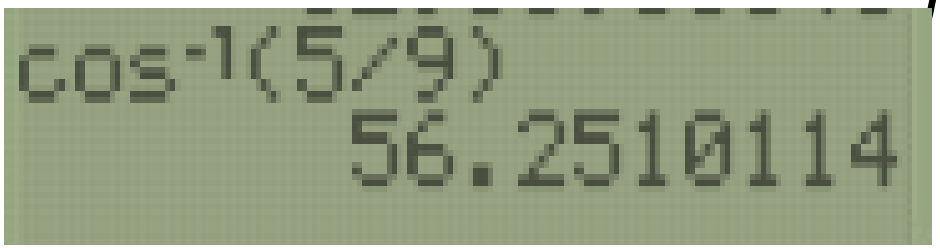
Round your answer to the nearest hundredth.



$\cos x = \frac{5}{9}$

2nd cos 5 ÷ 9

$= 56.3°$



Skills You Should Be Working on:

1. Trigonometric ratios in right triangles
2. Solve for side in a right triangle
3. Solve for an angle in a right triangle
4. Right triangle word problems