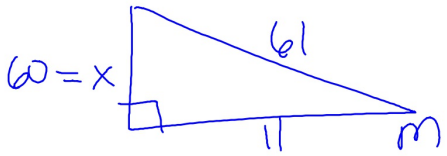
If the Cos M = $\frac{11}{61}$ what would Sin M = ? $\frac{60}{61}$



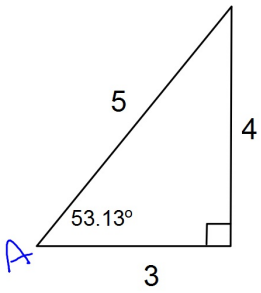
$61^2 = x^2 + 11^2$

$60 = x$

Up to this point you haven't really needed to use your calculator to Find Sin, Cos, and Tan except to find a missing side using the Pythagorean Theorem.

Why then are there buttons on the calculator for Sin, Cos, and Tan?

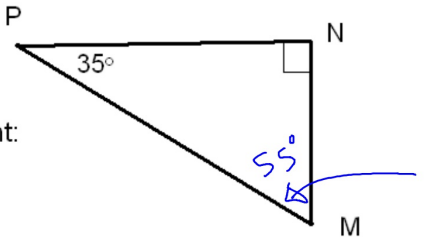
Using a calculator to find Sin, Cos, and Tan. SOHCAHTOA



Use your calulator to find each to the nearest hundredth. Written as ratios

1. Tan53.13° = 1.33 $\quad TanA = \frac{4}{3} = 1.33$
2. Sin53.13° = .80 $\quad SinA = \frac{4}{5} = .80$
3. Cos53.13° = .60 $\quad CosA = \frac{3}{5} = .60$

Use $\triangle MNP$ at the right:



$180° - 90° - 35° = 55°$

Find each to the nearest hundredth.

7. $\sin 35° = .57$
8. $\tan 35° = .70$
9. $\cos M$
10. $\sin M = .82$
11. $\cos 35° = .82$
12. $\tan M$

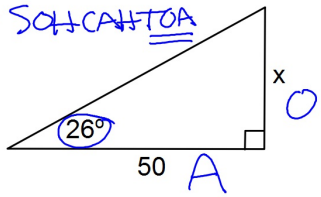
Solve each. Round to the nearest tenth.

a) $\frac{0.73}{1} = \frac{42}{x}$ 57.5

b) $\frac{0.38}{1} = \frac{x}{21}$ 8.0

solve by cross multiplying.

Finding a missing side using a trig ratio. SOHCAHTOA



1. Decide if you are using Sin, Cos, or Tan
2. Write the Tan ratio as a fraction. $\frac{x}{50}$
3. Find the Tan26° using your calculator. .49
4. Set these two equal to each other and solve for x. $\frac{x}{50} = \frac{.49}{1}$ $x = 24.5$

Setting up a proportion to find a missing side using the trigonometric ratios.

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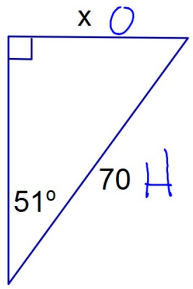
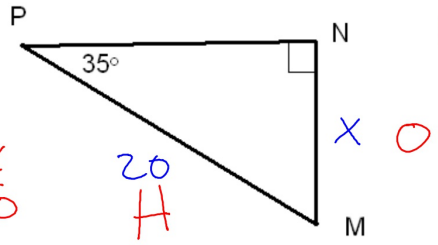


$\frac{\sin 51}{1} = \frac{x}{70}$ .78

54.4



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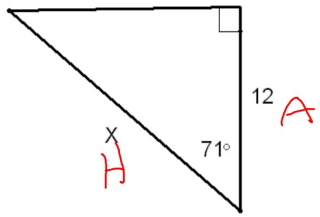
$\frac{\sin 35°}{1} = \frac{x}{20}$

13. If $MP = 20 feet$ find the length of $\overline{MN}$ to the nearest tenth.

11.5

14.



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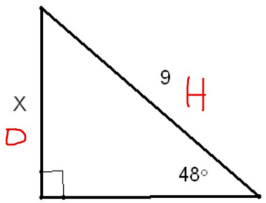
$\frac{\cos 71}{1} = \frac{12}{X}$

$X = 36.9$

15.



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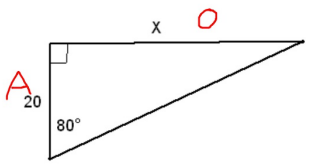
$\frac{\sin 48}{1} = \frac{X}{9}$

$X = 6.7$

16.



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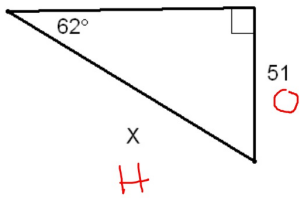
$\frac{\tan 80^\circ}{1} = \frac{X}{20}$

$X = 113.4$

17.



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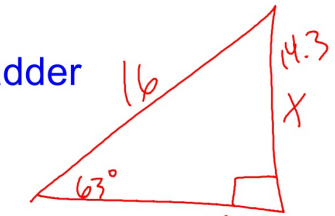
$\frac{\sin 62^\circ}{1} = \frac{51}{X}$

$X = 57.8$

A 16 foot ladder leans against a wall of a building. The ladder makes a 63° with the ground. How far up the wall can the ladder reach?



$\sin 63° = \frac{x}{16}$

$\frac{\sin 63°}{1}$

$X = 14.3$ ft