

$$f(x) = 18700(.85)^x$$

$$15\% = \frac{15}{100} = .15$$

$$1 - .15$$

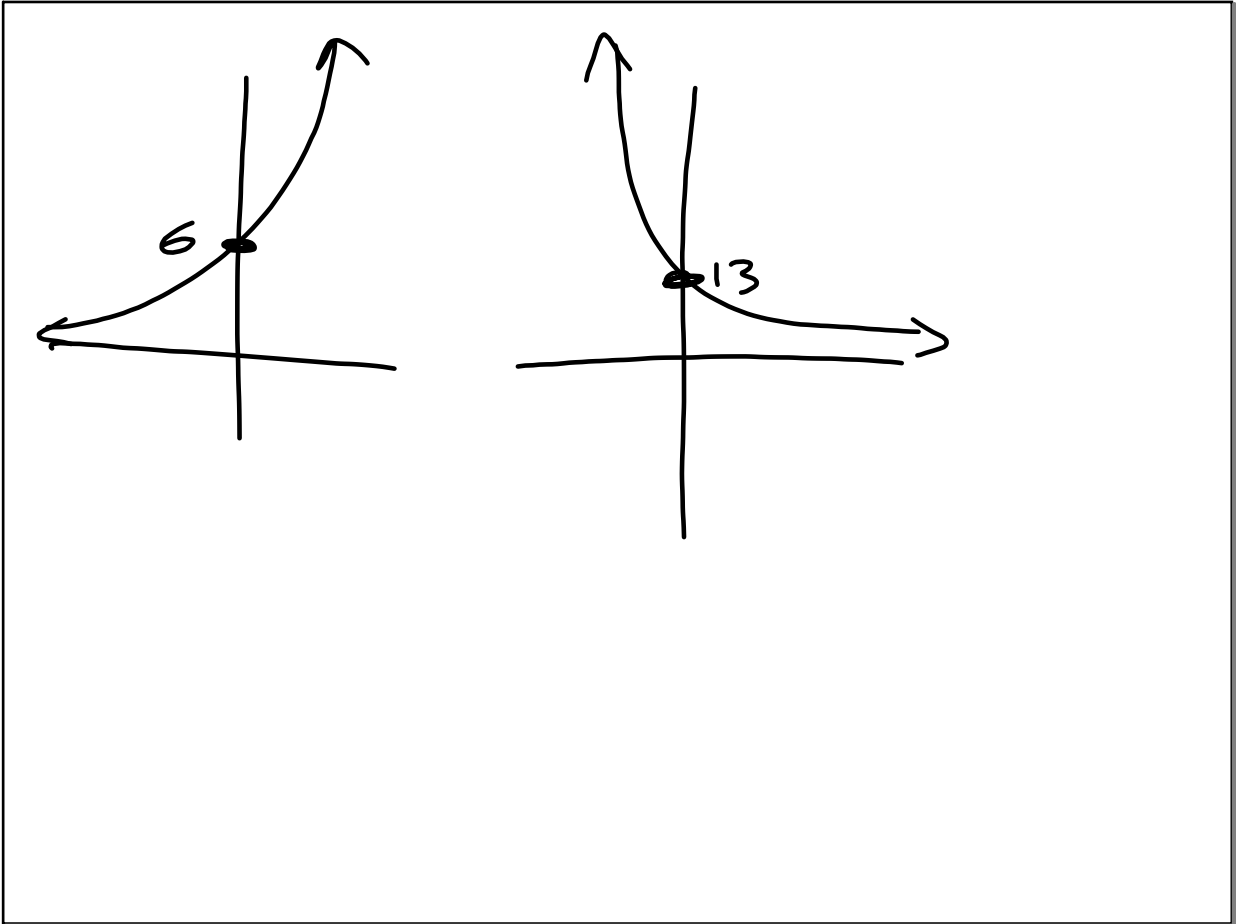
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May 28-8:19 AM

$$(x - -2)^2 + (y - 5)^2 = (4)^2$$

$$(x + 2)^2 + (y - 5)^2 = 16$$

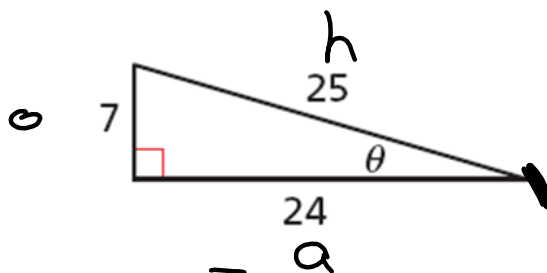
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May 28-8:27 AM

Semester Review B

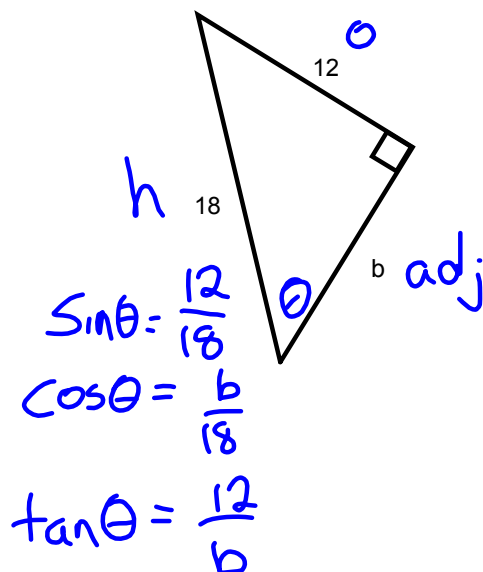
1. Find the values of the six trigonometric functions for θ .



$$\sin \theta = \frac{7}{25}$$

$$\cos \theta = \frac{24}{25}$$

$$\tan \theta = \frac{7}{24}$$



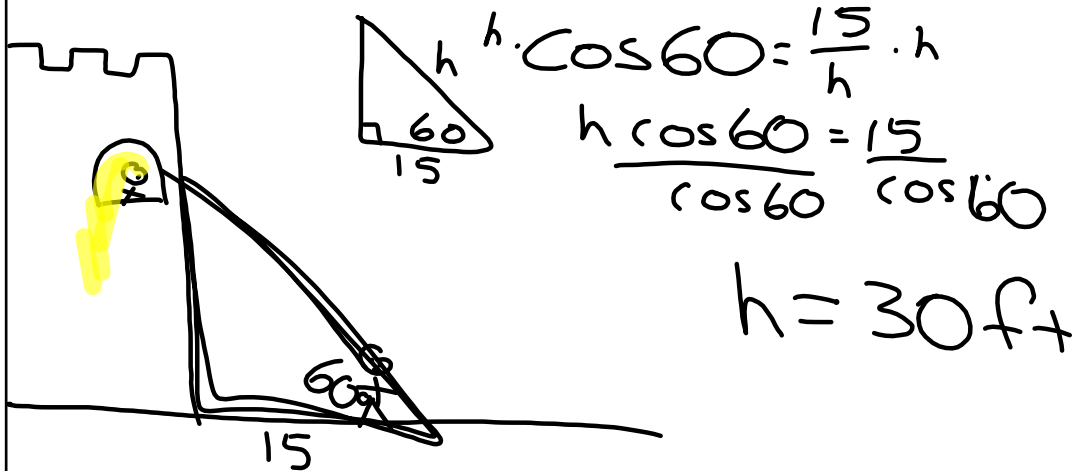
$$\sin \theta = \frac{18}{19}$$

$$\cos \theta = \frac{5}{19}$$

$$\tan \theta = \frac{18}{5}$$

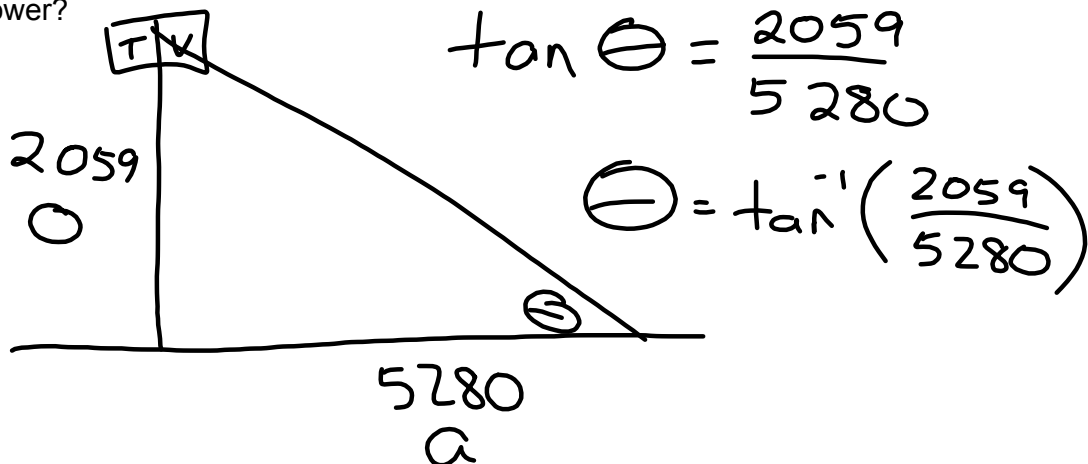
May 23-2:03 PM

A damsel is in distress and is being held captive in a tower. Her knight in shining armor is on the ground below with a ladder. When the knight stands 15 feet from the base of the tower and looks up at his precious damsel, the angle of elevation to her window is 60 degrees. How long does the ladder have to be?



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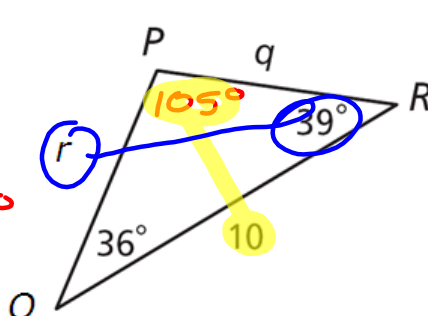
3. The tallest television transmitting tower in the world is in North Dakota, and it is 2059 feet tall. If you are on level ground exactly 5280 feet (one mile) from the base of the tower, what is your angle of elevation looking up at the top of the tower?



May 23-2:06 PM

Solve for r.

$\angle P$
 180
 $- 39$
 $- 36$
 $\hline 105^\circ$



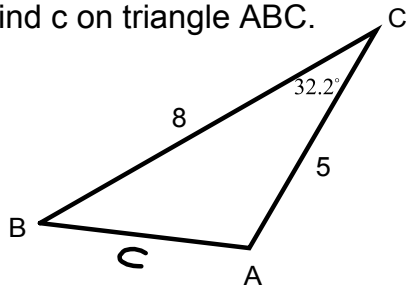
$\frac{\sin 39}{r} = \frac{\sin 105}{10}$

$\frac{10 \sin(39)}{\sin(105)} = \frac{r \sin 105}{\cancel{\sin 105}}$

$r \approx 6.52$

May 23-2:37 PM

Find c on triangle ABC.



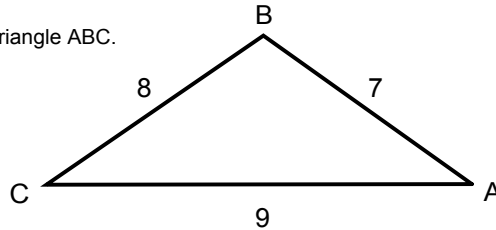
$c^2 = 8^2 + 5^2 - 2(8)(5)\cos 32.2$

$c^2 \approx 5$ 2nd ANS

$c \approx 4.62$

May 23-2:42 PM

2. Find $m\angle B$ on triangle ABC.



$$9^2 = 8^2 + 7^2 - 2(8)(7)\cos B$$

$$\frac{-32}{-112} = \frac{-2(8)(7)\cos B}{-2(8)(7)}$$

$$\cos B = \frac{32}{112}$$

$$m\angle B = \cos^{-1}\left(\frac{32}{112}\right)$$

May 23-2:43 PM

Convert the following from degrees to radians OR radians to degrees

1. $1 \cancel{30}^\circ \cdot \frac{\pi}{180} = \frac{\pi}{6}$

2. $7 \cancel{210}^\circ \cdot \frac{\pi}{180} = \frac{7\pi}{6}$

3. $\frac{\pi}{5} \cdot \frac{180}{\pi} = 36^\circ$

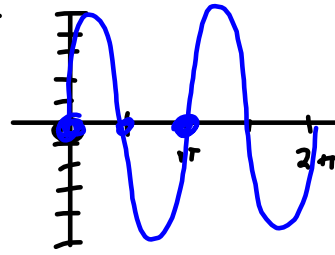
4. $\frac{7\pi}{4} \cdot \frac{180}{\pi} = 315^\circ$

May 23-2:10 PM

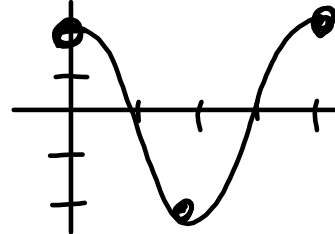
Graph.

5. $y = 5 \sin 2x$

Amp (with arrow pointing to 5)
middle (with arrow pointing to the x-axis)
2 cycles from 0-2π

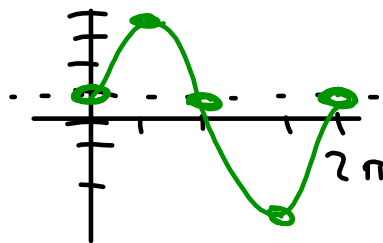


6. $y = 2 \cos x$



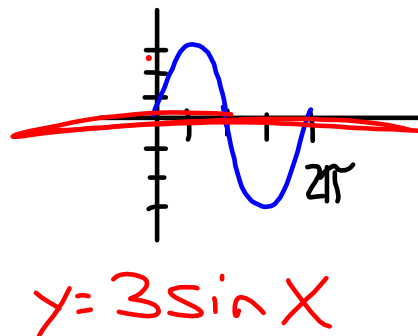
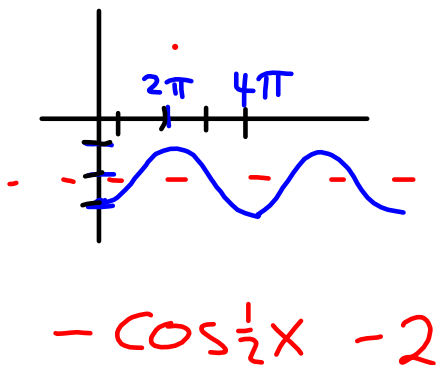
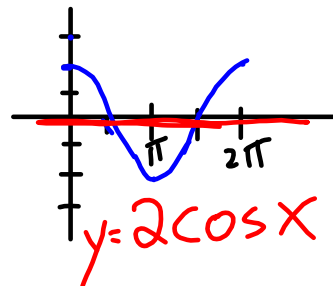
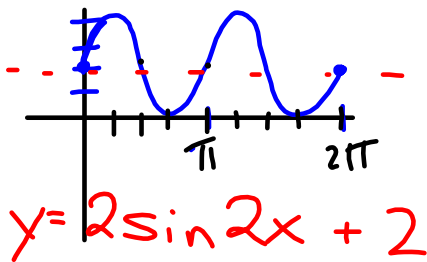
7. $y = 3 \sin x + 1$

Amp (with arrow pointing to 3)
up 1 (with arrow pointing to the +1)



May 23-2:33 PM

Write the equation given the graph.



May 23-2:34 PM