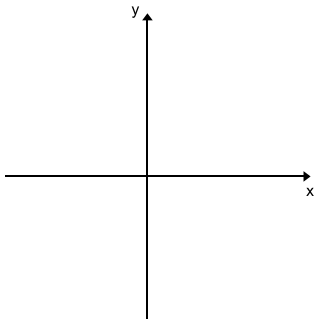
**Pre-Calculus-** Chapter 6 Test Review

Name: _____

Mini: _____ Date: _____

1a. Draw a sketch illustrating the angle $\cos^{-1} -\frac{3}{5}$. (Keep in mind the restrictions on the inverse trig functions.)

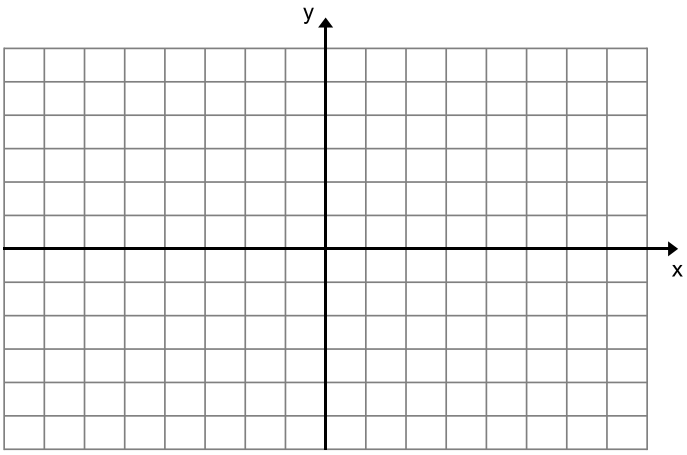



b. $Cos^{-1} -\frac{3}{5}$ is one value of $arccos -\frac{3}{5}$. On your sketch in part a, show another angle equal to $arccos -\frac{3}{5}$.

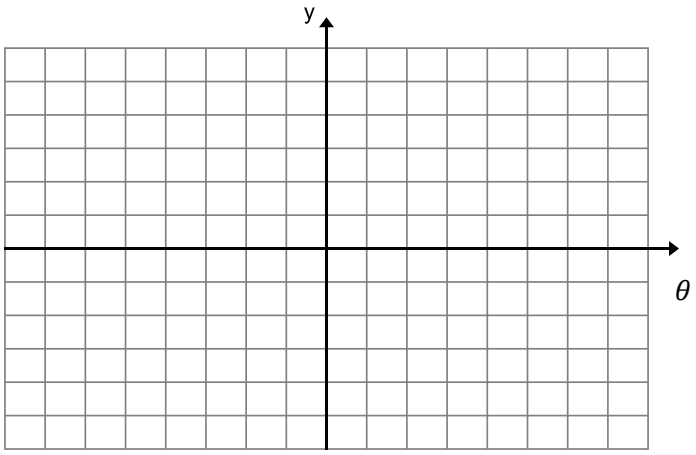
c. Write the general solution for $arccos -\frac{3}{5}$ in terms of $\cos^{-1} -\frac{3}{5}$, and then find the first four positive solutions.

2. Sketch the graph of the following transformed functions.

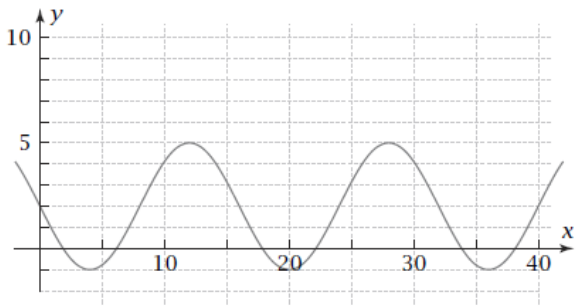
a. $y = 4 + 2\cos\frac{\pi}{8}(x - 5)$




b. $y = 2 + 2\sin 4(\theta - 30°)$




3. Write the equation for the sinusoid graphed below, using both the sine and cosine function.




Sine function: _____

Cosine function: _____

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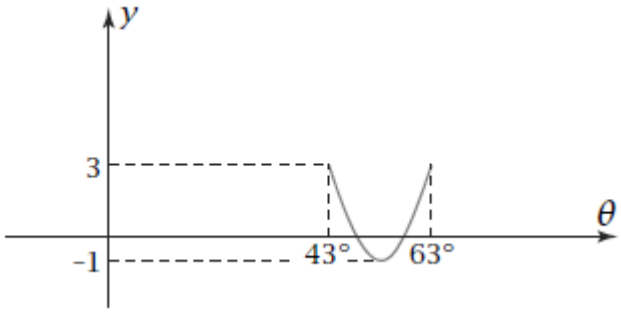
4a. The graph shows a half-cycle of a sinusoid. Sketch at least one complete cycle of the sinusoid.




b. Write a particular equation using the cosine function.

y=_____

c. If the sinusoid were extended to $\theta = 5461°$, what would y equal?

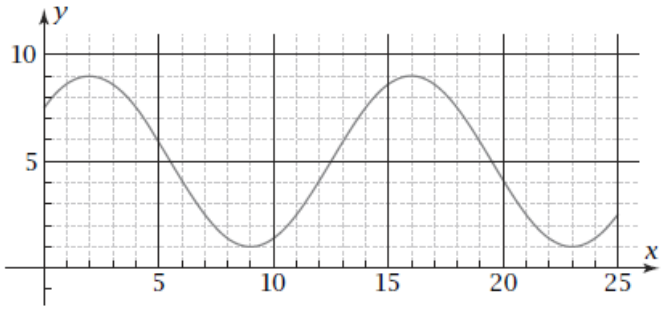
5. Convert the following from degrees to radians. Give exact and approximate answers rounded to two decimal places.

a. $36°$ b. $225°$ c. $-437°$ d. $2520°$

6. Convert the following from radians to degrees. Give exact and approximate answers rounded to two decimal places.

a. $\frac{7\pi}{6}$ b. $32\pi$ c. 5 d. -7.236

7a. On the graph below, draw a line at y=6.




b. Write the equation of the sinusoid using the cosine function.

c. Using your calculator, find the three solutions for x.

d. Algebraically find the general solution for when the sinusoid will equal 6. Verify your answers in part c.