

# MAT 110 Review Test #2 Part 2

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Find the amplitude or period as requested.

1. Find the amplitude of  $y = 3 \cos\left(2x + \frac{\pi}{3}\right)$ .

2. Find the period of  $y = 2 \sin\left(8x + \frac{\pi}{2}\right)$ .

Find the phase shift of the function.

3.  $y = 4 \sin\left(4x - \frac{\pi}{2}\right)$

Graph the function over a one-period interval.

4.  $y = 4 + \frac{1}{3} \sin(2x - \pi)$

5.  $y = \frac{1}{2} + \cos\left(2x - \frac{2\pi}{3}\right)$

Find a function of the form  $y = A \sin [B(x - C)] + D$  with the given period, phase shift, and range.

6.  $\frac{\pi}{2}, \frac{\pi}{3}, [-7, -3]$

Find the equation for the curve in its final position.

7. The graph  $y = \sin(x)$  is shifted a distance of  $\pi/12$  to the right, stretched by a factor of 7, translated 2 units downward, then reflected in the  $x$ -axis.

Graph the function.

8.  $y = \frac{1}{2} \tan\left(\frac{2}{3}x + \frac{\pi}{6}\right)$

9.  $f(x) = \csc\left(\frac{1}{2}\left(x - \frac{\pi}{2}\right)\right)$

Find the equation for the curve in its final position.

10. The graph  $y = \tan(x)$  is shifted a distance of  $\pi/12$  to the right, stretched by a factor of 7, translated 8 units upward, then reflected in the  $x$ -axis.

# Answer Key

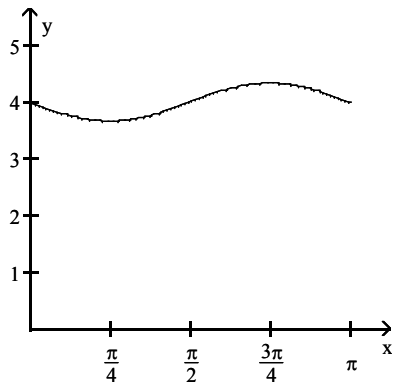
Testname: UNTITLED2

1. 3

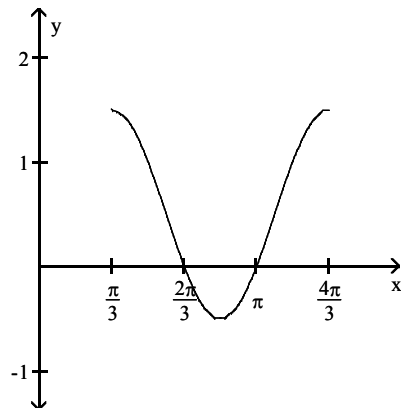
2.  $\frac{\pi}{4}$

3.  $\frac{\pi}{8}$

4.



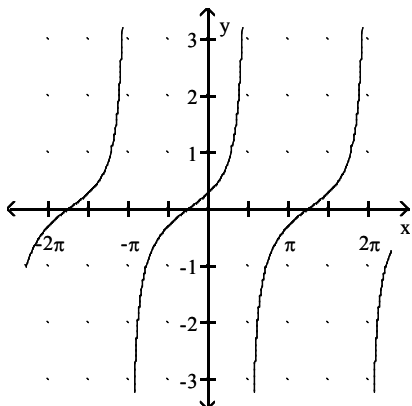
5.



6.  $y = 2 \sin \left( 4 \left( x - \frac{\pi}{3} \right) \right) - 5$

7.  $y = -7 \sin \left( x - \frac{\pi}{12} \right) + 2$

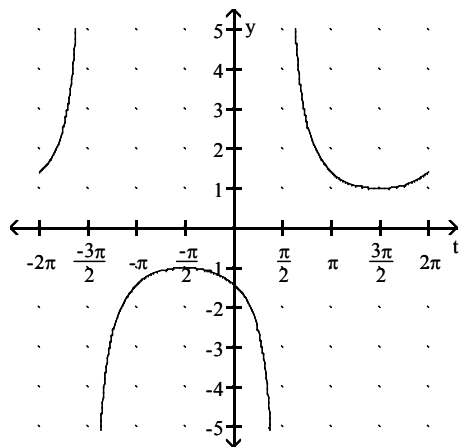
8.



Answer Key

Testname: UNTITLED2

9.



10.  $y = -7 \tan\left(x - \frac{\pi}{12}\right) - 8$