Review for Test 4.4-4.7

NONCALCULATOR PROBLEMS

Graphs of sine and cosine.

1) Graph one full period, label all critical points and find all important characteristics

a) $y = 3sin\left(2x + \frac{\pi}{4}\right) - 1$ **b)** $y = 2 - 4cos\left(x - \frac{\pi}{2}\right)$

For problems 2 – 5, sketch the graph of the function. Be sure to label each tick mark, and find all critical values. For numbers 2 and 3, graph two cycles, and for numbers 4 and 5, graph one cycle.

2 $y = -3\tan\left(x - \frac{\pi}{2}\right)$ **3.** $y = 2\cot(x) + 1$

4. $y = -4\csc\left(3x + \frac{\pi}{3}\right)$ **5.** $y = \sec(4x) - 3$

For problems 6 – 11 evaluate each expression.

6. $\arcsin(-1) =$ _____ **7.** $\cos^{-1}(1) =$ _____ **8.** $arc\cot\left(\sqrt{3}\right) =$ _____

9. $arc\sec\left(-\sqrt{2}\right) =$ _____ **10.** $\sin(\arcsin 0.3) =$ _____ **11.** $\tan^{-1}\left(\tan\frac{11\pi}{6}\right) =$ _____

12. If possible, find the exact value.

a. $\arcsin\left(-\frac{1}{2}\right)$ **b.** $\sin^{-1}\left(\frac{\sqrt{3}}{2}\right)$ **c.** $\sin^{-1}(2)$

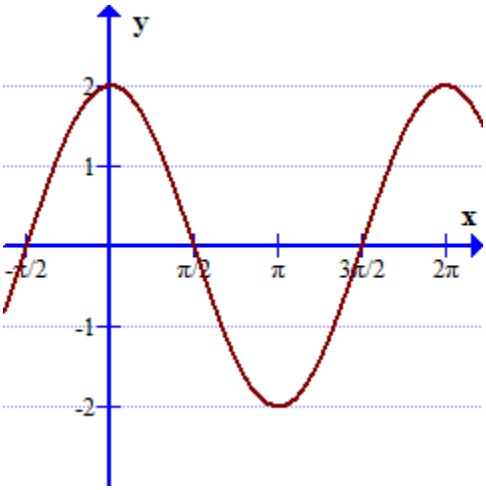
13. Find the exact value.

a. $\arccos\left(\frac{\sqrt{2}}{2}\right)$ **b.** $\arctan(0)$ **c.** $\tan^{-1}(-1)$

14. Find the exact value.

a. $\tan\left(\arccos\frac{2}{3}\right)$ **b.** $\cos\left[\arcsin\left(-\frac{3}{5}\right)\right]$

15. Find all key features and write the function of the following graph



CALCULATOR PROBLEMS- Applications

Review ALL application problems given (worksheets given for notes, classwork, and homework)

Review Quiz 4.4

Review Unit Circle. KNOW TANGENT VALUES for each angle on the unit circle.

Although the focus of this test is 4.4,4.5, and 4.7 you must be fluent in all of chapter 4. In other words, knowledge of sections 4.1-4.3 is needed to answer some of the questions on the test.