My signature on this assessment confirms I have used no outside resources and adhered to all assessment protocols assigned to this daily grade/quiz/test/exam.

Accel Precalc **Quiz #10** Name _____
Unit 6: Graphs and Inverses of Trig Functions
Lessons 1 – 4; Evaluate Trig Functions, Graphing Sine and Cosine; Amplitude, Period, Phase Shift, Vertical Displacement **[45 total pts]**

Four-Function Calculator Only

❖ Choose the letter for the correct equation for the given graph. There is only ***one*** correct answer.[4 pts each]

Use these interval for ALL graphs: Intervals on x-axis: $\frac{\pi}{2}$ **Intervals on y-axis:** 1

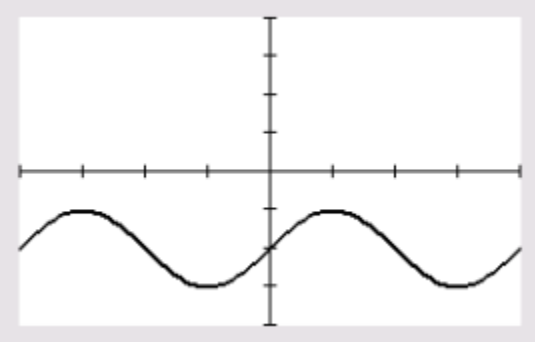
1. _____

A. $y = -\cos(x + \frac{\pi}{2})$

B. $y = \sin(x) - 2$

C. $y = \sin(x - \frac{\pi}{2})$

D. $y = -2\cos(x)$



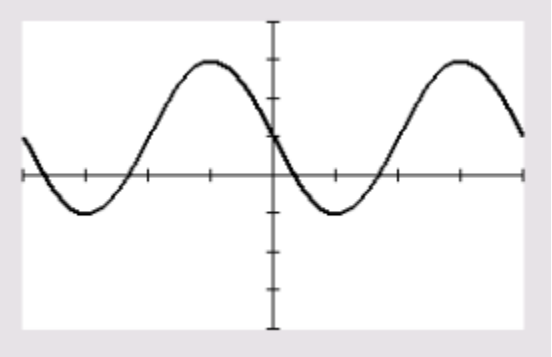
2. _____

A. $y = \sin x + 1$

B. $y = \cos(x - \frac{\pi}{2}) + 1$

C. $y = -2\sin x + 1$

D. $y = -2\cos x + 1$



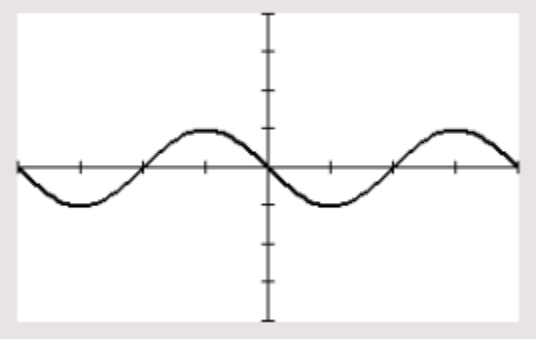
3. _____

A. $y = \sin(x - \pi)$

B. $y = \cos(x + \pi)$

C. $y = \sin(x - \frac{\pi}{2})$

D. $y = \cos(x - \pi)$



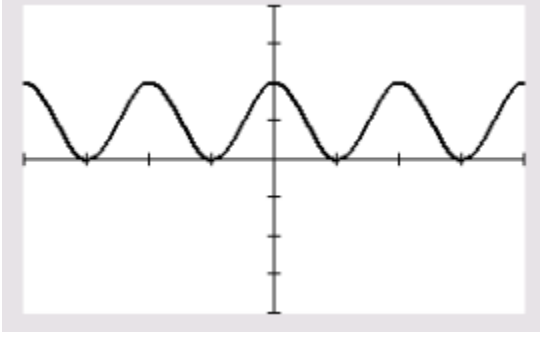
4. _____

A. $y = \sin(\frac{1}{2}x) + 1$

B. $y = \cos(2x) + 1$

C. $y = \cos(\frac{1}{2}x) + 1$

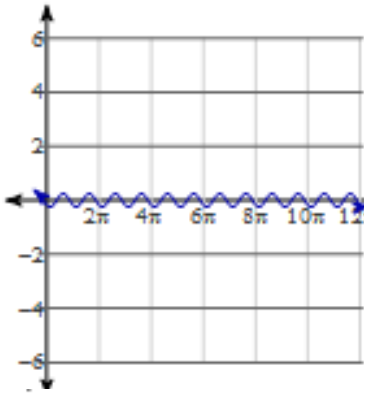
D. $y = \sin(2x) + 1$



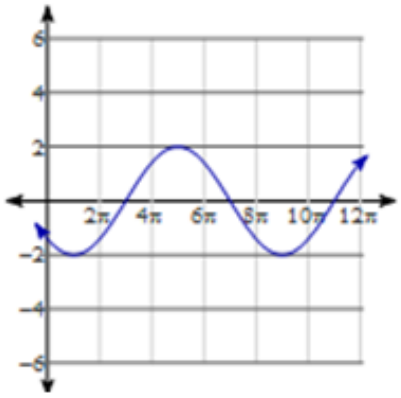
❖ Choose letter for the correct graph for the equation. There is only ***one*** correct answer. Follow scale given on each graph .[4 pts each]

5. $y = 2\cos\left(\frac{\theta}{4} + \frac{3\pi}{4}\right)$ _____

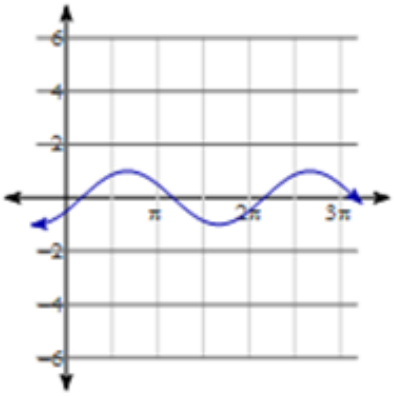
A)



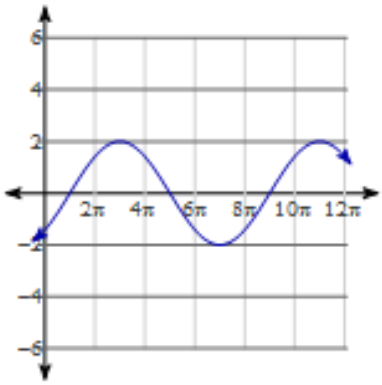
B



C)

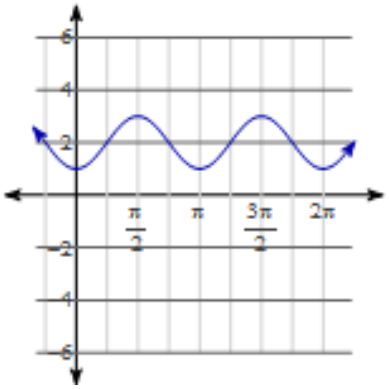


D)

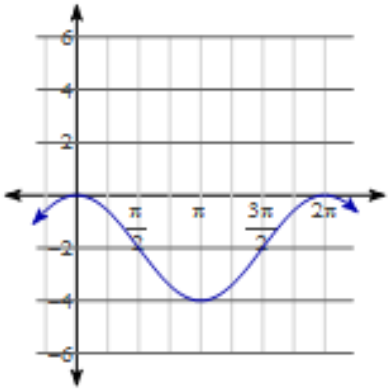


6. $y = \sin\left(2\theta + \frac{\pi}{2}\right) - 2$ _____

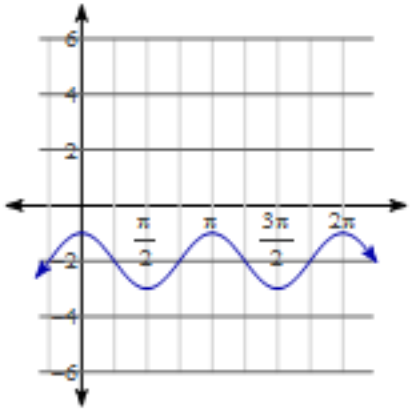
A)



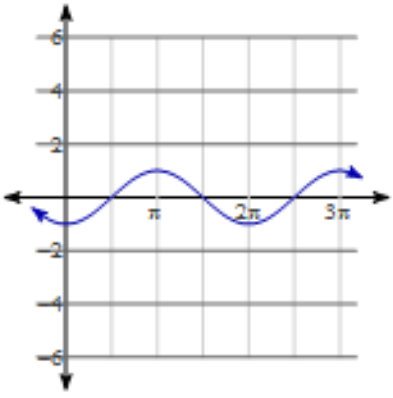
B)



C)



D)



7. Write the equation of a **sine function** given the following information.[4 pts]

amplitude = 3 new period = π phase shift = $\pi/4$ left
vertical shift = 1 up reflect across x-axis

y = _____

8. Write the equation of a **cosine function** given the following information.[4 pts]

amplitude = 5 new period = 4π phase shift = $\pi/2$ right
vertical shift = 3 down no reflection

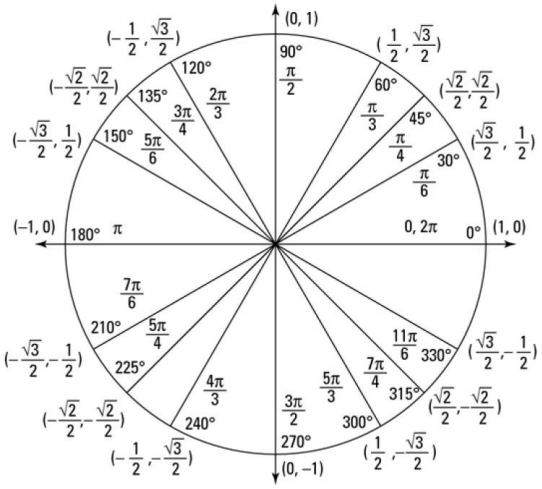
y = _____

❖ Give the **exact value** for each of the following. **Reduce all fractions**.[3 pts each]

9. $\cos\left(\frac{-20\pi}{3}\right)$ _____

10. $\tan(570°)$ _____

11. $\csc\left(\frac{15\pi}{4}\right)$ _____



12. Given the point $\left(\frac{-3\sqrt{5}}{7}, \frac{2}{7}\right)$ that corresponds to the angle θ in the coordinate plane, find the **exact value** of $\tan\theta$. [3 pts] _____

13. State the quadrant in which θ lies given $\cot\theta < 0$ and $\sec\theta > 0$.[1 pt] _____