

10.1 Corrective Assignment – Graphing Sine and Cosine

Name: _____

Pre-Calculus

For 1-6, identify the given information and graph the trig function.

1) $y = 3 \cos x$
 Amp: $|3| = 3$ Period: 2π

2) $y = -\cos 2x$
 Amp: $|-1| = 1$ Period: π

3) $y = 3 \cos \frac{1}{2}x$
 Amp: $|3| = 3$ Period: 4π

4) $y = 1 - 3 \sin 4x$
 Amp: $|-3| = 3$ Period: $\frac{\pi}{2}$
 midline: $y = 1$

5) $y = 1 + 2 \sin 2x$
 Amp: $|2| = 2$ Period: π
 midline: $y = 1$

6) $y = 2 \cos \frac{1}{3}x - 1$
 Amp: $|2| = 2$ Period: 6π
 midline: $y = -1$

For 7 – 9, use the given information to create a sine function.

7)
 Amplitude: 11
 Period: 6π
 Vertical Shift: up 3
 $y = \pm 11 \sin(\frac{1}{3}\theta) + 3$

8)
 Amplitude: 3
 Period: $\frac{3\pi}{7}$
 Vertical Shift: down 9
 $b = 2\pi \cdot \frac{7}{3\pi}$
 $b = \frac{14}{3}$
 $y = \pm 3 \sin(\frac{14}{3}\theta) - 9$

9)
 Amplitude: 6
 Period: $\frac{1}{4}$
 Vertical Shift: up 7
 $y = \pm 6 \sin(4\theta) + 7$

For 10-12, write the equation of the following sine curves.

10)

$y = -\sin 4\theta$

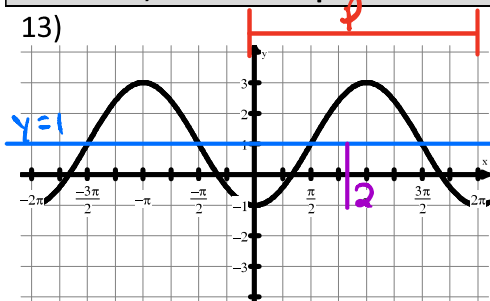
11)

$y = 3 \sin \theta - 1$

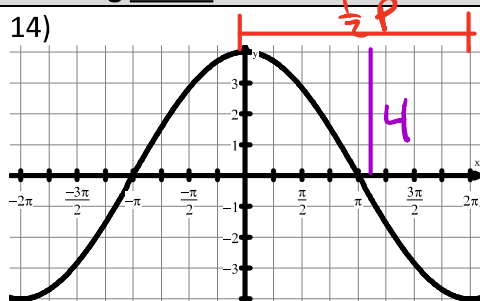
12)

$y = -2 \sin 2\theta + 1$

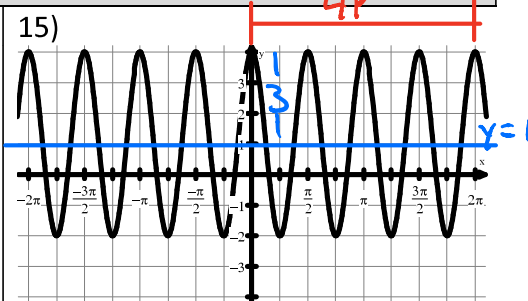
For 13-15, write the equation of the following *cosine* curves.



$$y = -2 \cos \theta + 1$$



$$y = 4 \cos\left(\frac{1}{2}\theta\right)$$



$$y = 3 \cos(4\theta) + 1$$

Answers to 10.1 Corrective Assignment

1) Amp: 3 Period: 2π	2) Amp: 1 Period: π	3) Amp: 3 Period: 4π
4) Amp: 3 Period: $\frac{\pi}{2}$	5) Amp: 2 Period: π	6) Amp: 2 Period: 6π
7) $y = 11 \sin\left(\frac{1}{3}x\right) + 3$	8) $y = 3 \sin\left(\frac{14}{3}x\right) - 9$	9) $y = 6 \sin(8\pi x) + 7$
10) $y = -\sin 4x$	11) $y = 3 \sin x - 1$	12) $y = 1 - 2 \sin 2x$
13) $y = -2 \cos x + 1$	14) $y = 4 \cos\left(\frac{1}{2}x\right)$	15) $y = 3 \cos 4x + 1$