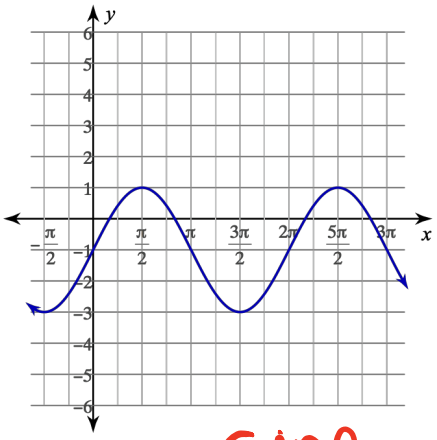
Secondary 3 Name _____ Period _____

10.2 HW: Amplitude and Midline of Sine and Cosine

Determine whether each graph is sine or cosine. Identify the amplitude and midline. Write an equation for the function.

1.



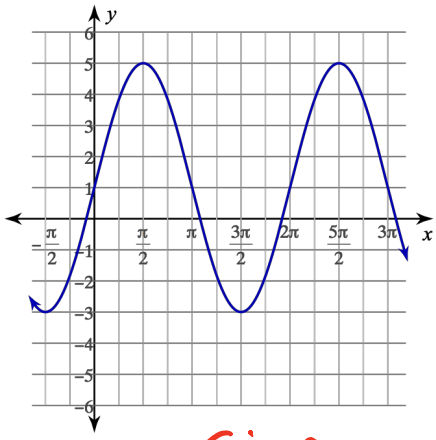
Sine/Cosine? sine

Amplitude: 2

Midline: $y=-1$

Equation: $y=2\sin\theta-1$

2.



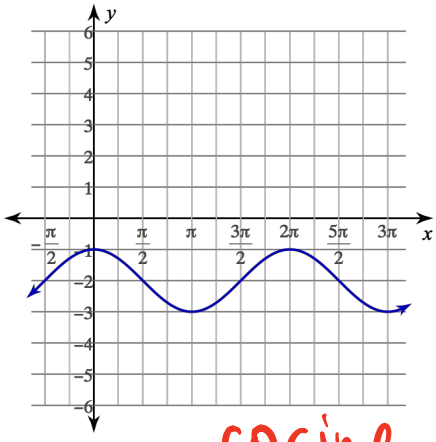
Sine/Cosine? sine

Amplitude: 4

Midline: $y=1$

Equation: $y=4\sin\theta+1$

3.



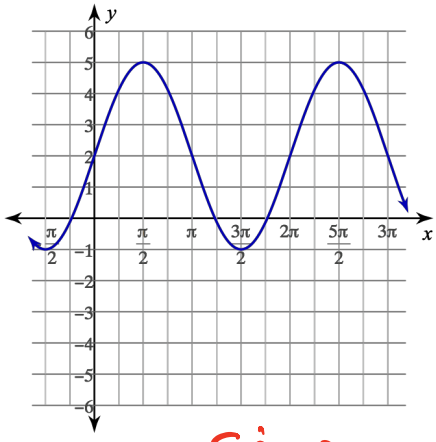
Sine/Cosine? cosine

Amplitude: 1

Midline: $y=-2$

Equation: $y=\cos\theta-2$

4.



Sine/Cosine? sine

Amplitude: 3

Midline: $y=2$

Equation: $y=3\sin\theta+2$

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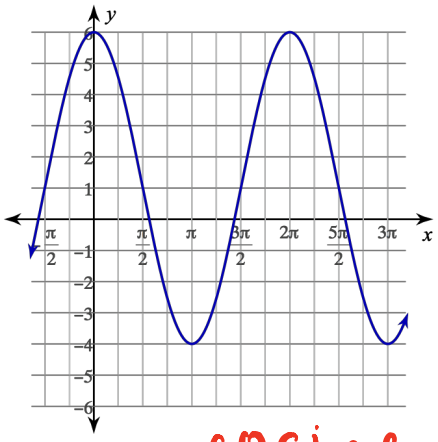
5.



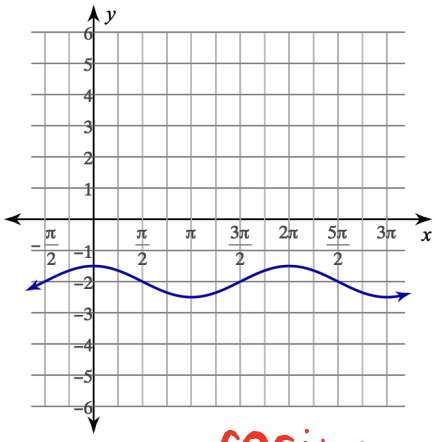
Sine/Cosine? cosine

Amplitude: 5

Midline: $y = 1$

Equation: $y = 5\cos\theta + 1$

6.



Sine/Cosine? cosine

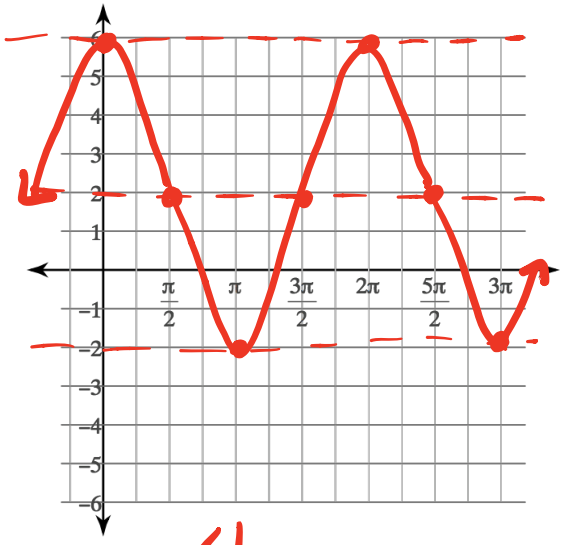
Amplitude: $\frac{1}{2}$

Midline: $y = -2$

Equation: $y = \frac{1}{2}\cos\theta - 2$

Sketch the graph of each function. State the amplitude and midline.

7. $y = 4\sin\theta + 2$



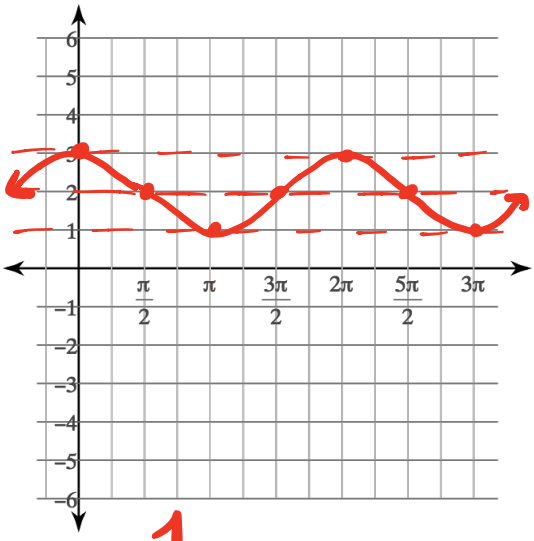
Amplitude: 4

Midline: $y = 2$

Domain: $(-\infty, \infty)$

Range: $[-2, 6]$

8. $y = \cos\theta + 2$



Amplitude: 1

Midline: $y = 2$

Domain: $(-\infty, \infty)$

Range: $[1, 3]$

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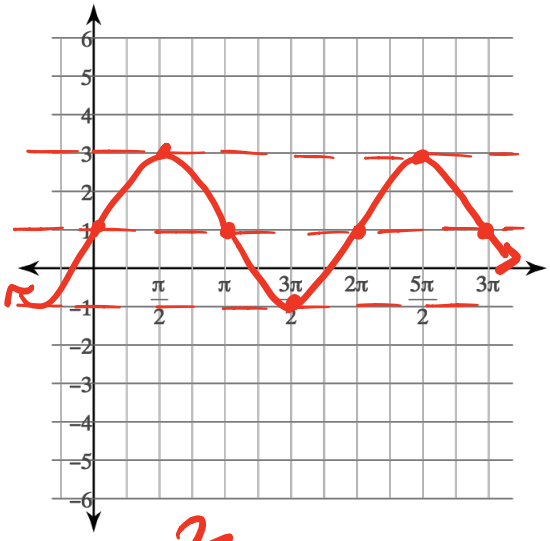
9. $y = 2\sin\theta + 1$



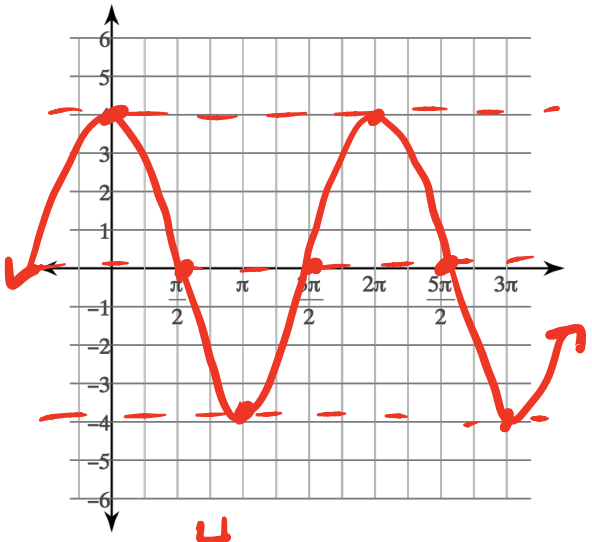
Amplitude: 2

Midline: $y = 1$

Domain: $(-\infty, \infty)$

Range: $[-1, 3]$

10. $y = 4\cos\theta$



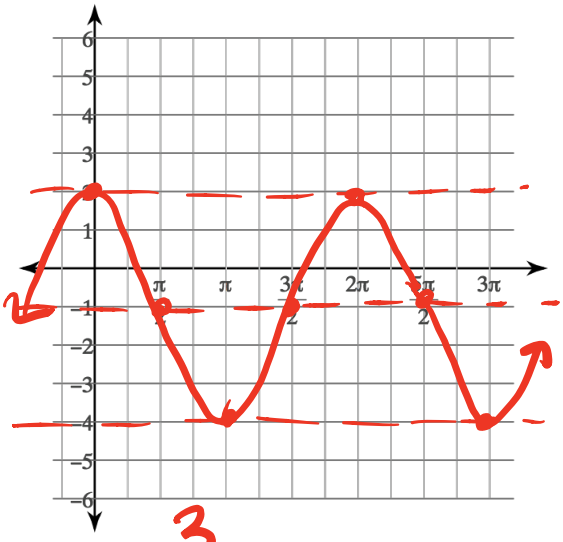
Amplitude: 4

Midline: $y = 0$

Domain: $(-\infty, \infty)$

Range: $[-4, 4]$

11. $y = 3\cos\theta - 1$



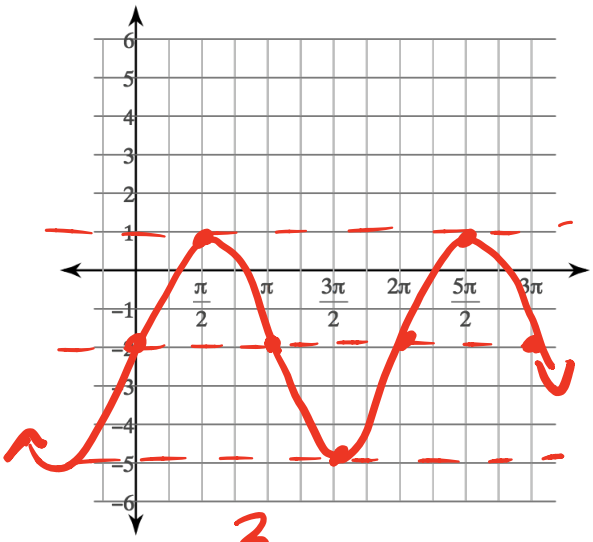
Amplitude: 3

Midline: $y = -1$

Domain: $(-\infty, \infty)$

Range: $[-4, 2]$

12. $y = 3\sin\theta - 2$



Amplitude: 3

Midline: $y = -2$

Domain: $(-\infty, \infty)$

Range: $[-5, 1]$

STOP!