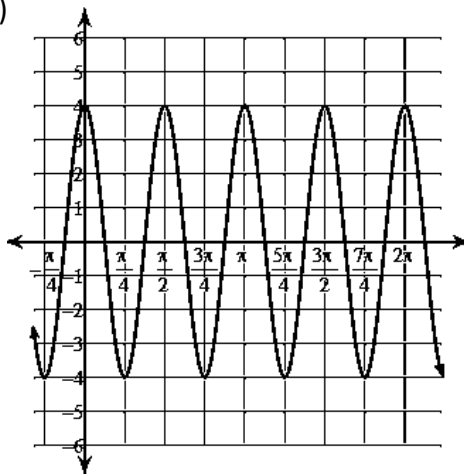


Unit 10 Review

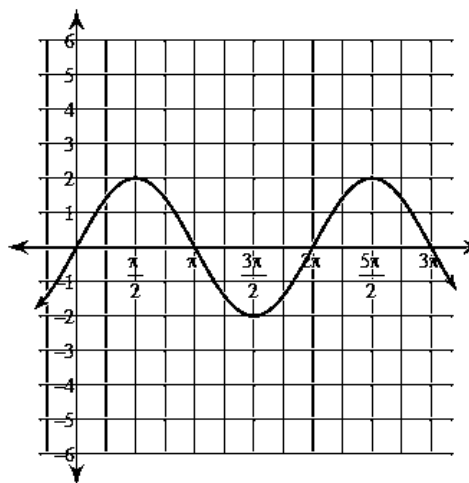
Using radians, find the following from the given graphs.

1)



- Amplitude:
- Period:
- Number of Cycles (between $0-2\pi$):
- Domain:
- Range:
- Maximum(s) (between $0-\pi$):
- Minimum(s) (between $0-\pi$):
- Zero(s) (between $0-\pi$):
- Equation of the Graph:

2)



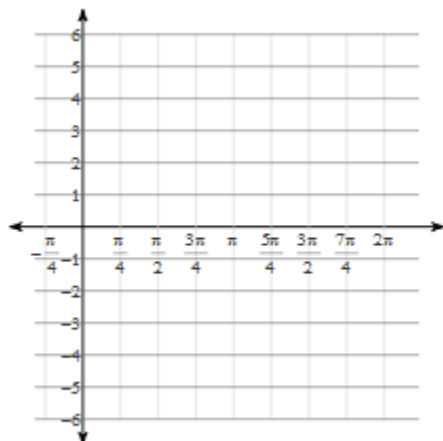
- Amplitude:
- Period:
- Number of Cycles (between $0-2\pi$):
- Domain:
- Range:
- Maximum(s) (between $0-2\pi$):
- Minimum(s) (between $0-2\pi$):
- Zero(s) (between $0-2\pi$):
- Equation of the Graph:

Using radians, find the amplitude and period of each function.

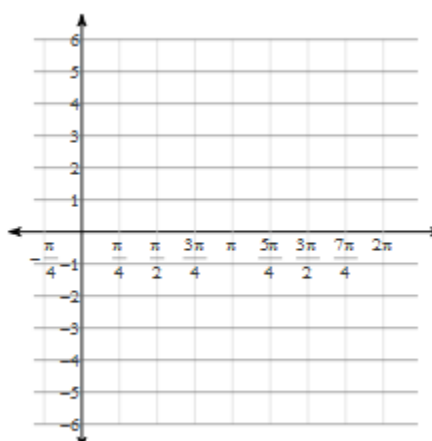
3) $y = \frac{1}{4} \cdot \cos \frac{\theta}{4}$

4) $y = 3\sin 2\theta$

5) Sketch the graph for two cycles of the sine curve with an amplitude of 3, a period of π , and $a < 0$. Then write the equation.

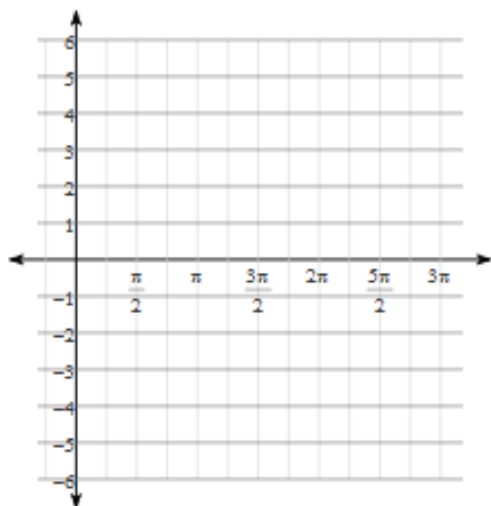


6) Sketch the graph for two cycles of the cosine curve with an amplitude of 2, a period of $\frac{\pi}{2}$, and $a > 0$. Then write the equation.

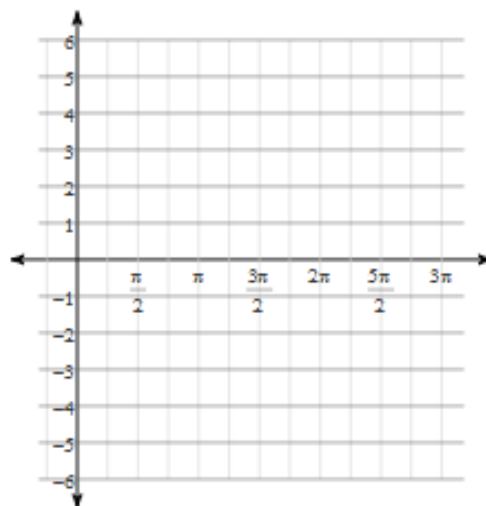


Using radians, find the amplitude and period of each function. Then graph.

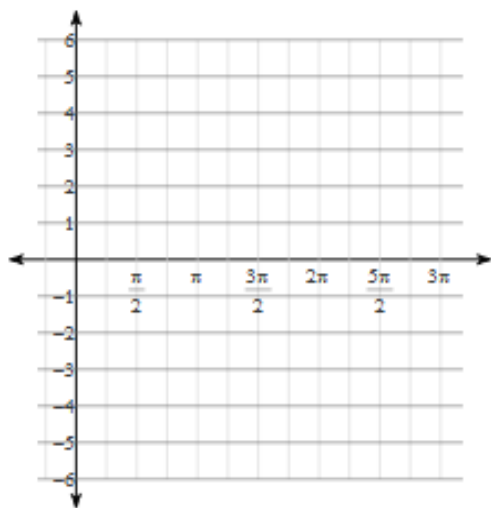
7) $y = 3\sin\left(\theta + \frac{\pi}{4}\right)$



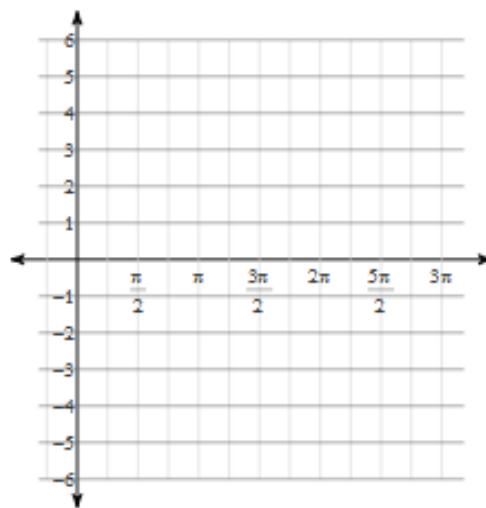
8) $y = 4\cos\left(\theta + \frac{\pi}{2}\right)$



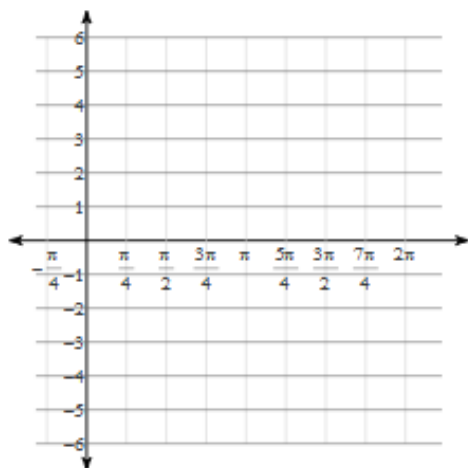
9) $y = \cos \theta + 1$



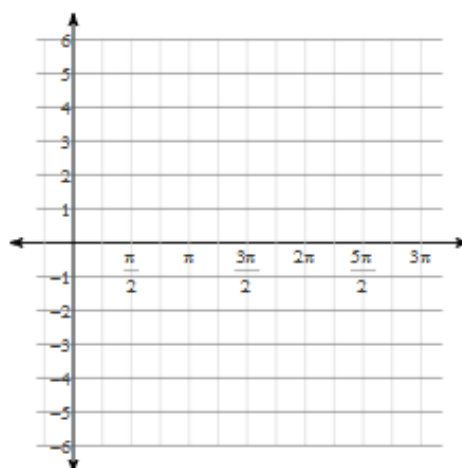
10) $y = 1 + 2\sin \theta$



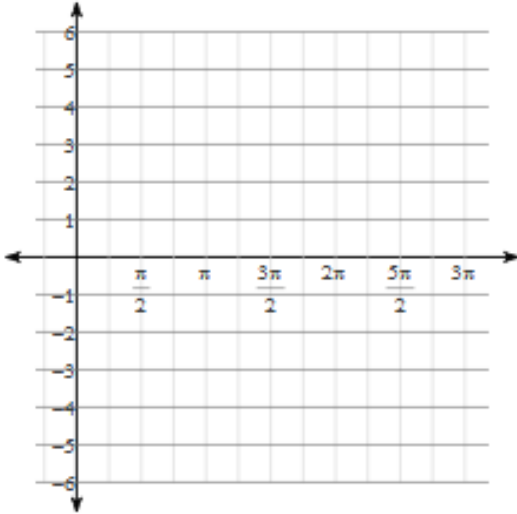
11) $y = 4\sin 2\theta + 2$



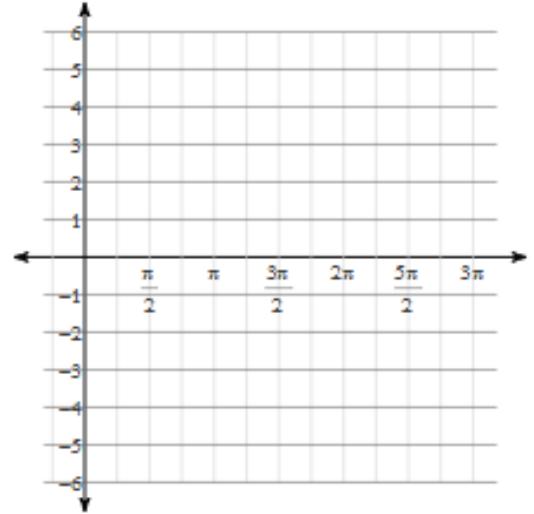
12) $y = -2 + 2\cos\left(\theta - \frac{\pi}{6}\right)$



$$13) y = 1 + 3\cos\left(\theta + \frac{\pi}{2}\right)$$



$$14) y = \frac{1}{2} \cdot \sin\left(\theta + \frac{3\pi}{4}\right) - 2$$



Write an equation for each translation.

21) $y = \sin \theta$; 3 units down; amplitude of 3

22) $y = \cos \theta$; 2 units up; $\frac{2\pi}{3}$ units to the right

23) $y = \cos \theta$; 1 unit up, phase shift π to the right, and an amplitude of 2.

24) $y = \sin \theta$; 2 units down, $\frac{3\pi}{2}$ left, and $a < 0$.