

Write an equation of a sinusoid with the following criteria:

1. Amp = 3, Period = 8, thru (5, 0)

2. Amp = 5, Period = 3π , thru (-2, 0)

Graph one period of the given function.

Show period work. Label both axes.

3. $y = 2\sin \frac{1}{4}x$

4. $y = -3\cos 6\pi x$

5. $y = -\frac{2}{3}\sin 2x$

6. $y = 4\cos(-\pi x)$

Describe the period, amplitude & phase shift of each equation.

7. $y = 2.5\cos 6x + 4$ 8. $y = 5\cos(4x + \frac{\pi}{2}) - 1$

9. $y = -3\sin \frac{1}{2}x$ 10. $y = \frac{5}{3}\sin(x - \pi) + 4$

Describe the transformations required to obtain the graph of the given function from the parent.

11. $y = -\sin \frac{1}{8}x + 6$ 12. $y = \frac{1}{6}\cos(-\frac{2}{5}x + 2) - 3$

Find the zeros, max(s), min(s) in the interval $[0, 2\pi]$.

13. $f(x) = \frac{1}{2}\cos 2x$ 14. $y = -\sin 2x$ 15. $f(x) = 9\sin \frac{x}{2}$