

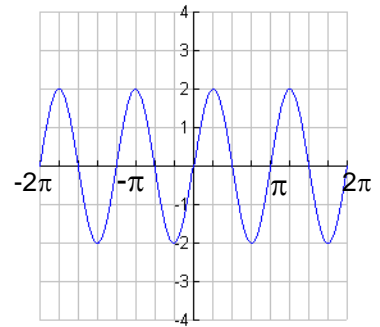
1) Match the graph with the correct function

a. $y = 2 \cos 2x$

c. $y = 2 \sin 2x$

b. $y = 2 \cos \frac{1}{2}x$

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



2) Find the amplitude and period of the function: $y = -1.5 \cos \frac{1}{2}x$.

a. Amplitude = 1.5

b. Amplitude = 1.5

Period = $\frac{1}{2}$

Period = 4π

c. Amplitude = -1.5

d. Amplitude = -1.5

Period = $\frac{1}{2}$

Period = 4π

Fill in the blanks. Be sure to indicate **direction** on shifts.

3) $y = 3 \sin 4x + 5$

amplitude _____ period _____

horizontal shift _____ vertical shift _____

4) $y = -2 \cos 3\left(x + \frac{\pi}{2}\right) - 5$

amplitude _____ period _____

horizontal shift _____ vertical shift _____

5) Determine the transformations in the graph of g with respect to the graph of f if

$$f(x) = \sin 4x \text{ and } g(x) = \sin\left(4x - \frac{\pi}{2}\right) - 3$$

a) $\frac{\pi}{8}$ to the right, 3 down

b) $\frac{\pi}{2}$ to the right, 3 down

c) $\frac{\pi}{8}$ to the right, 3 up

d) $\frac{\pi}{2}$ to the right, 3 up

6) Identify the function that has an amplitude of 3, is reflected across the x-axis and has a period of $\frac{2\pi}{3}$.

a) $y = 3 \cos 3x$

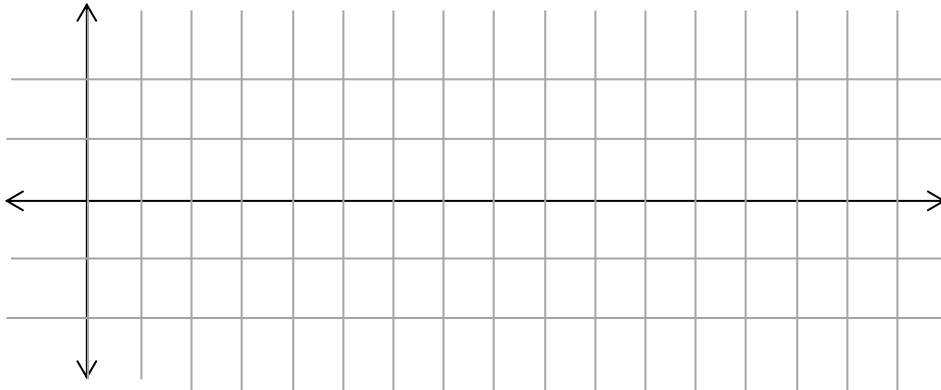
b) $y = 3 \sin 3x$

c) $y = \tan \frac{3}{2}x$

d) $y = -3 \sin 3x$

For #7-8, accurately graph at least one full period.

7) Graph $y = 2\cos 4x$ amplitude: _____ period: _____



8) Graph $y = 2 \sin \frac{\pi}{2}(x+3)+1$ amplitude: _____ period: _____

