

Given the following functions...

$$y = a \sin (bx - c) \quad y = a \cos (bx - c)$$

Find the value of a , b , and c .

$$y = 2 \sin (4x - 2\pi)$$

$$y = -3 \cos (2\pi x + 8)$$

$$y = -\sin (2x - \frac{\pi}{2})$$

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$$\text{Amplitude} = |a| \quad \text{Period} = \frac{2\pi}{b} \quad \text{Phase Shift} = \frac{c}{b} \quad \begin{array}{l} \text{if } c > 0, \text{ shift right;} \\ \text{if } c < 0, \text{ shift left} \end{array}$$

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$$y = -3 \cos (2\pi x + 4)$$

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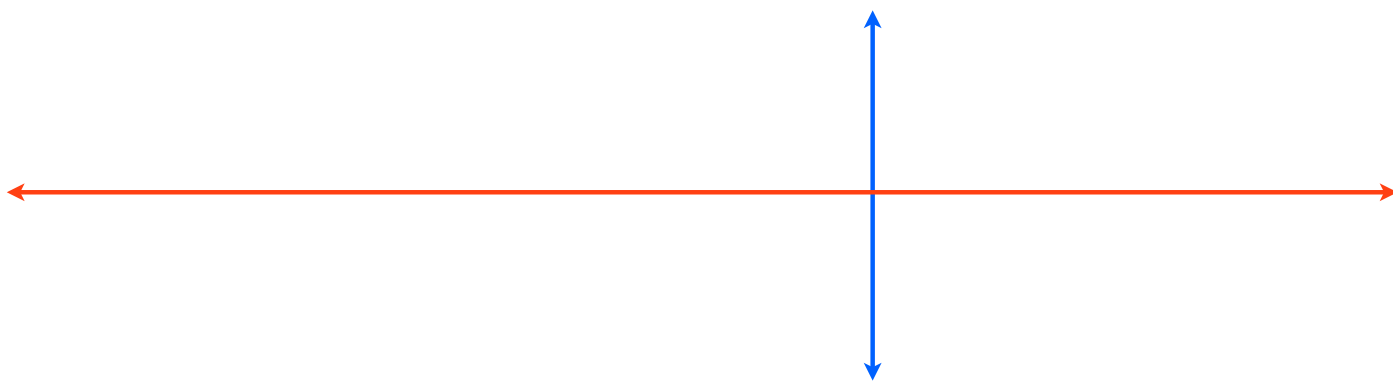
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$$y = -4 \sin \left(2x - \frac{\pi}{2} \right)$$

Graph $y = 3 \sin(2x - \pi)$



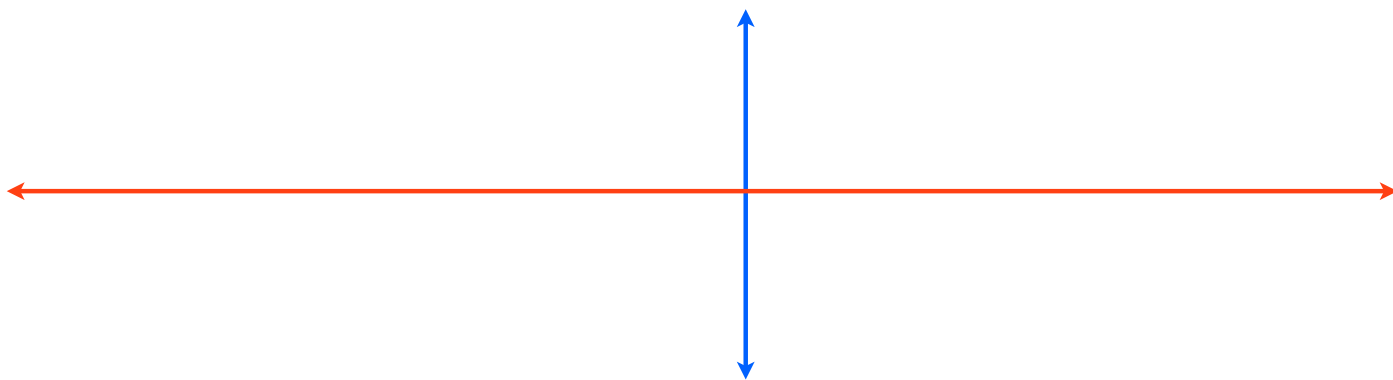
Graph $y = 2 \cos(4x + 3\pi)$



Graph $y = -4 \sin \left(\frac{1}{2}x - \frac{\pi}{2} \right)$



Graph $y = -3 \cos (x + \pi)$



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if $c > 0$, shift right;
if $c < 0$, shift left