

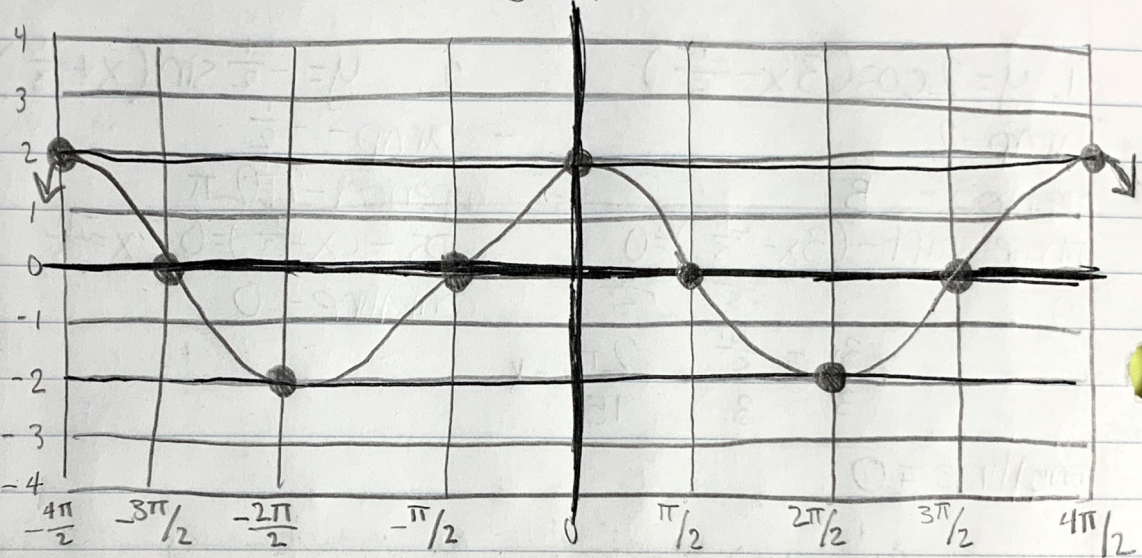
Steps for Graphing Transformations

1. Midline
2. Amplitude
3. Period
4. Determine scale (denom.) $PS + \frac{2\pi}{4B}$
5. Find Five key points (start & add)
6. Use parent function and graph

Examples:

$y = 2 \cos \theta$

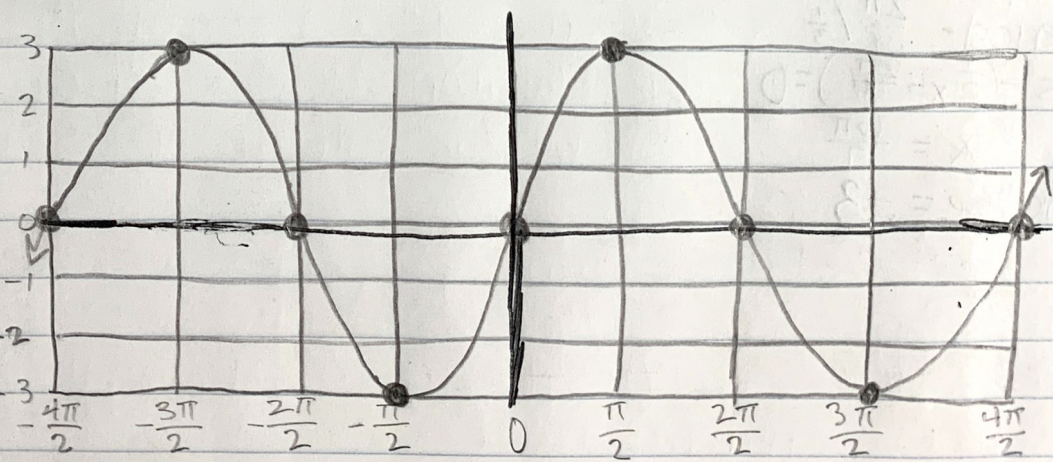
- midline - 0
- amplitude - 2
- period - 2π
- scale - $PS + \frac{2\pi}{4B}$



$0 + \frac{2\pi}{4(1)} = \frac{2\pi}{4} = \frac{\pi}{2}$
 start ← denom. ← add

$y = 3 \sin x$

- mid - 0
- amp - 3
- per - 2π
- scale - $0 + \frac{2\pi}{4(1)}$



$0 + \frac{2\pi}{4} = \frac{\pi}{2}$

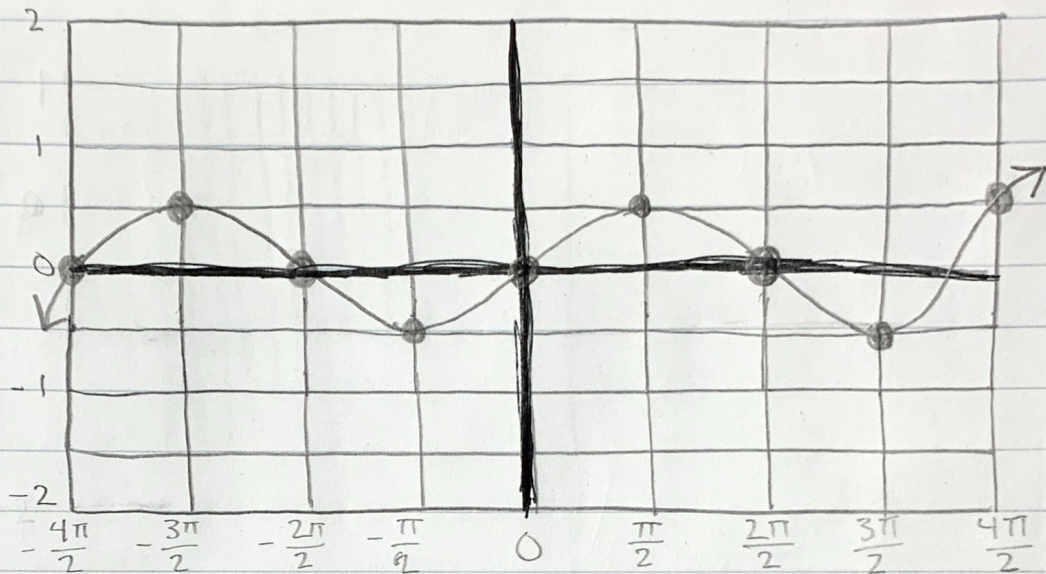
$$y = \frac{1}{2} \sin(x)$$

mid - 0

amp - $\frac{1}{2}$

per - 2π

scale - $0 + \frac{2\pi}{4(1)}$
 $= \frac{\pi}{2}$



$$y = 4 \sin 4\theta$$

mid - 0

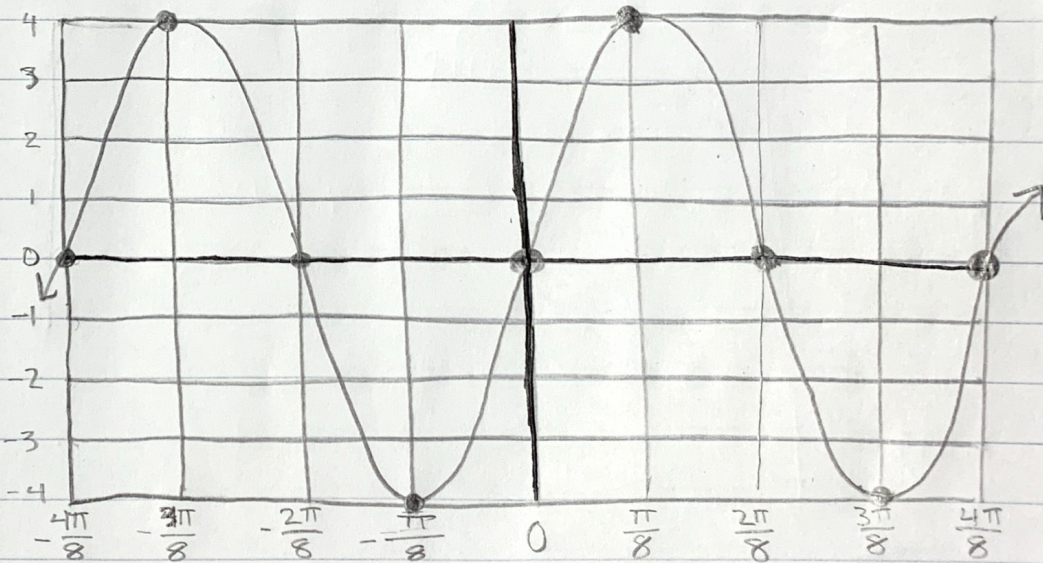
amp - 4

per - $\frac{2\pi}{4} = \frac{\pi}{2}$

scale - $0 + \frac{2\pi}{4(4)}$
 $= \frac{2\pi}{16} = \frac{\pi}{8}$

domain - $(-\infty, \infty)$

range - $(-4, 4)$



no parenthesis, no phase shift