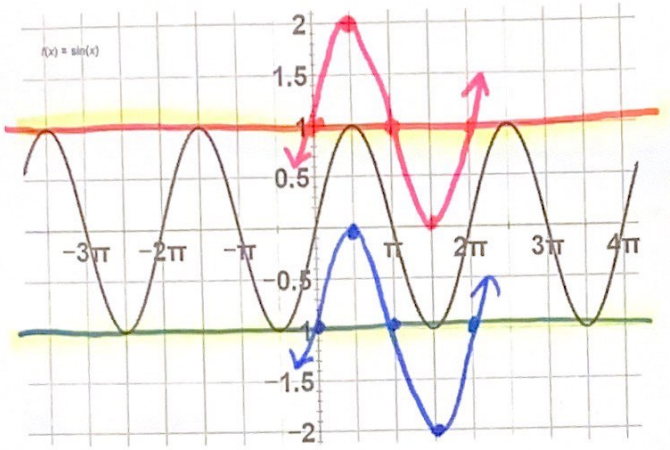
Notes: Vertical Shifts and Amplitudes

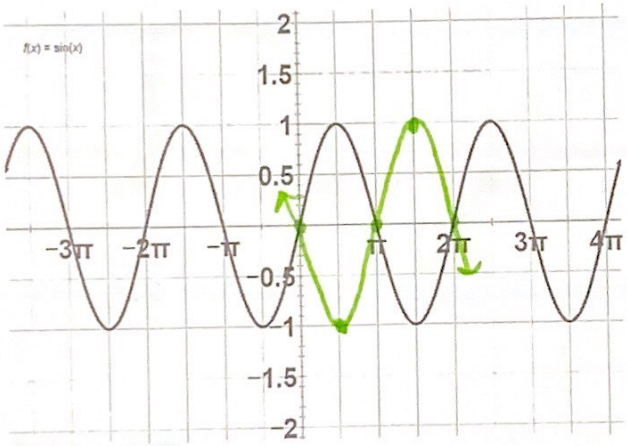
1. Sketch the graphs of $y = \sin\theta + 1$, $y = \sin\theta - 1$ using different colors and label the graph with the equation. UP 1
b). Describe the transformations that occurred using +1 and -1.



Amp: 1 Per: 2π V.S: up 1 P.S. /

$y = \sin\theta - 1$
down 1

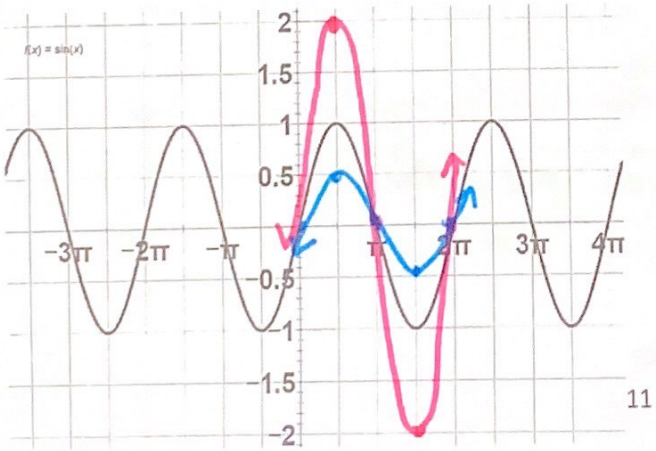
2. a). Sketch the graph of $y = -\sin\theta$ using a different color. b). Describe the transformation that occurred from having a negative coefficient.



Amp: 1 Per: 2π V.S: ∅ P.S. /

Flip!
mid
min
mid
max
mid

3. a). Sketch the graph of $y = 2\sin\theta$ and $y = \frac{1}{2}\sin\theta$ using a different color. b.) Describe the transformation.



Amp: 2 Per: 2π V.S: / P.S. /

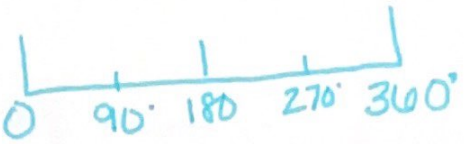
Amp: $\frac{1}{2}$ 2π / /

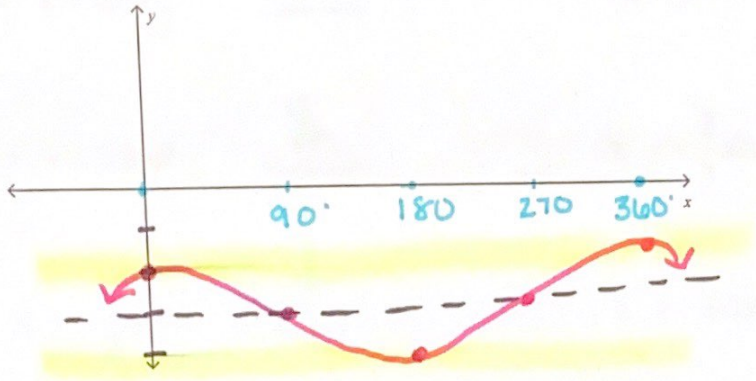
Graph each function in degrees.

midline moves down 3

Ex1 $y = \cos\theta - 3$

Amp: 1 Per: 360 V.S: down 3 P.S. /



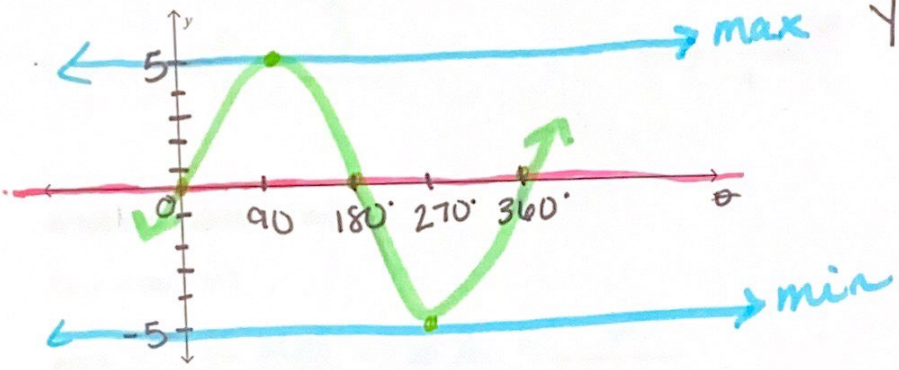


Ex 2 $y = 5\sin(\theta)$

Same as parent

0 360

Amp: 5 Per: 360° V.S: / P.S. /



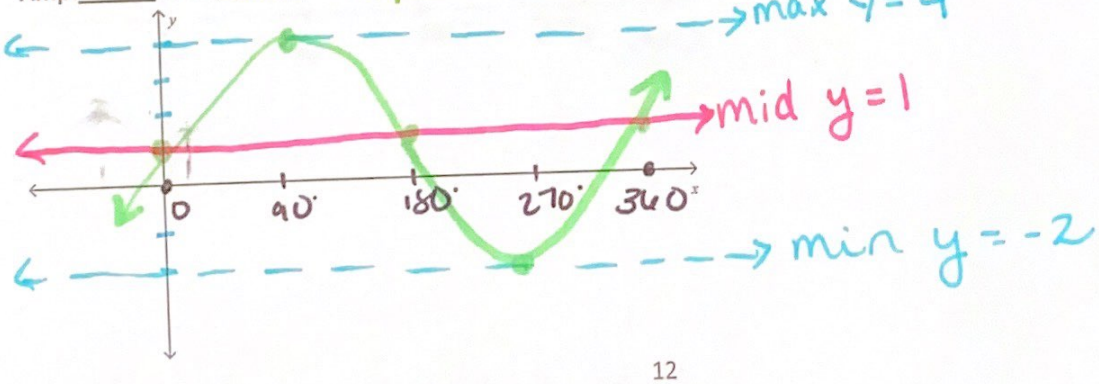
max

min

You must label the axis

Ex 3 $y = 3\sin\theta + 1$

Amp: 3 Per: 360° V.S: up 1 P.S. /



max y = 4

mid y = 1

min y = -2