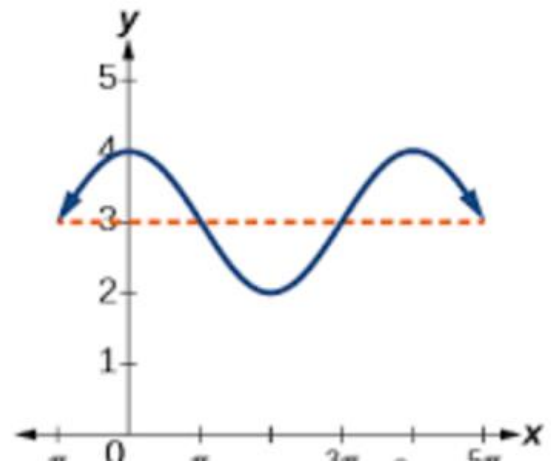
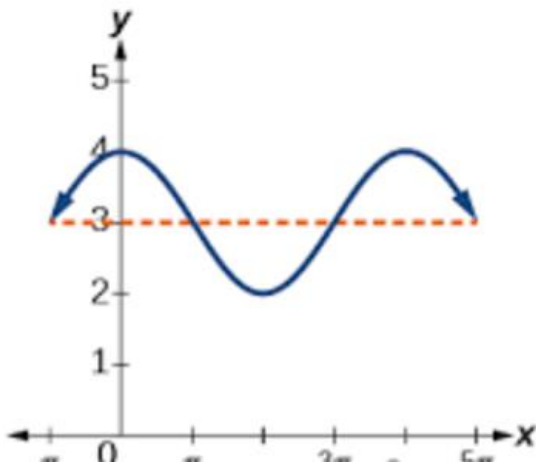


Section 3-2 Sinusoidal Graphs

$$y = C + A \cos B(\theta - D) \quad \text{or} \quad y = C + A \sin B(\theta - D)$$

- C is the location of the sinusoidal axis (vertical translation up or down)
- $|A|$ is the amplitude (or vertical dilation, which can be positive or negative if graph upside down)
- B is how you find the period ($360^\circ / B$)
- D is the phase displacement (horizontal translation left or right)



Graph.

1. $y = 4 + 3\cos 2(\theta - 70^\circ)$

sinusoidal axis:

amplitude:

period:

phase displacement:

2. $y = -1 + 5\sin 3(\theta + 10^\circ)$

sinusoidal axis:

amplitude:

period:

phase displacement:

Write an equation for the sinusoid using cosine or sine, whichever seems easier.

