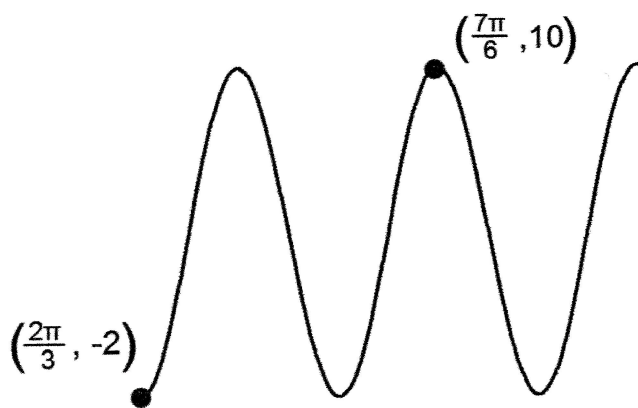


Use this Cosine graph:



1. a. Find the Amplitude: *amplitude* =

b. In the equation $y = a\cos x$ would a be positive or negative?

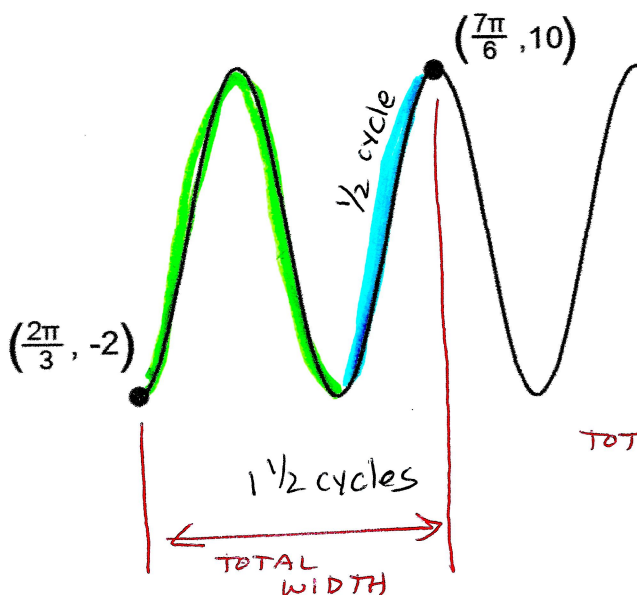
2. Find the Equation of the midline:

$y =$

3. Find the Period.

Period:

ANSWERS



$$\text{MAX} = 10$$

$$\text{MIN} = -2$$

$$\text{TOTAL WIDTH} = \frac{7\pi}{6} - \frac{2\pi}{3} \cdot \frac{2}{2} = \frac{7\pi}{6} - \frac{4\pi}{6} = \frac{3\pi}{6}$$

$$= \frac{\pi}{2}$$

1. a. Find the Amplitude: $\text{amplitude} = \frac{\text{max} - \text{min}}{2} = \frac{10 - (-2)}{2} = \frac{12}{2}$

Amp = 6

b. In the equation $y = a \cos x$ would a be positive or negative?

• since graph starts at a min it is upside down
therefore, **a IS NEGATIVE**

2. Find the Equation of the midline:

midline $y = \frac{\text{max} + \text{min}}{2} = \frac{10 + (-2)}{2} = \frac{8}{2}$

$y = 4$

3. Find the Period.

Period: $\frac{\pi}{3}$

$\text{period} = \frac{\text{TOTAL WIDTH BETWEEN 2 PTS}}{\# \text{ cycles between those 2 PTS}}$

$$= \frac{\frac{\pi}{2}}{1\frac{1}{2}} = \frac{\frac{\pi}{2}}{\frac{3}{2}}$$

$$= \frac{\pi}{2} \cdot \frac{2}{3} = \frac{\pi}{3}$$