

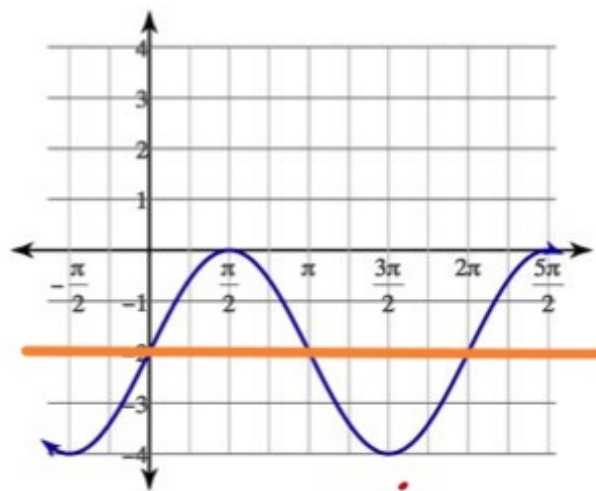
## 10.2 Amplitude and Midline

A.

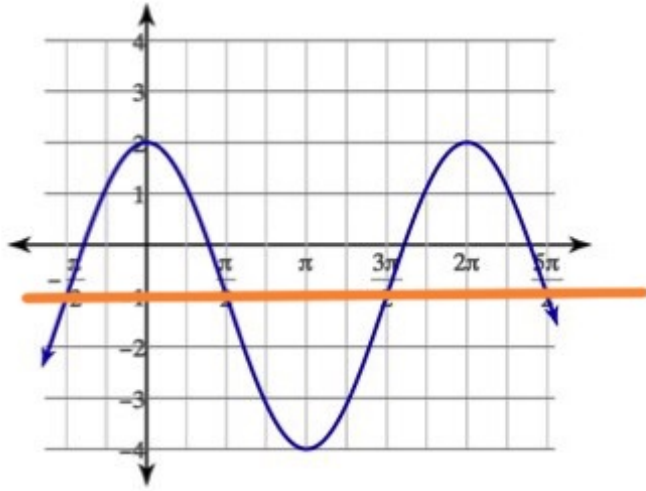
Sine/Cosine? sineAmplitude: 1Midline:  $y = 3$ Equation:  $y = 1\sin\theta + 3$ 

Vertical stretch

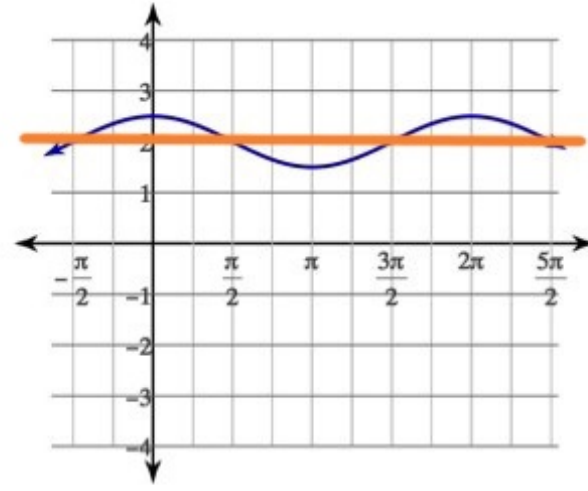
B.

Sine/Cosine? sineAmplitude: 2Midline:  $y = -2$ Equation:  $y = 2\sin\theta - 2$

C.

Sine/Cosine? cosineAmplitude: 3Midline:  $y = -1$ Equation:  $y = 3\cos\theta - 1$ 

D.

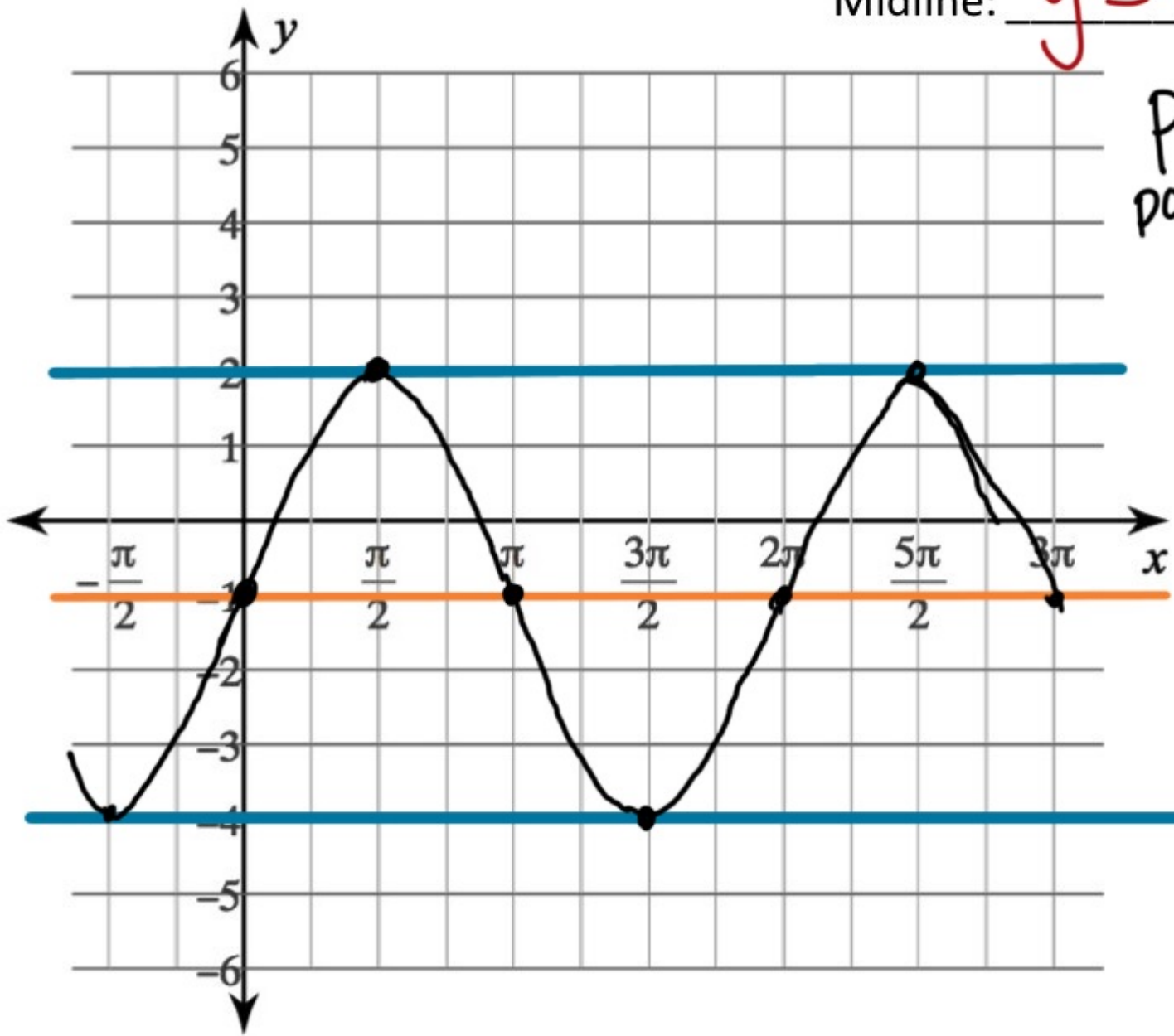
Sine/Cosine? cosineAmplitude:  $\frac{1}{2}$ Midline:  $y = 2$ Equation:  $y = \frac{1}{2}\cos\theta + 2$

E.  $y = 3 \sin \theta - 1$

Amplitude: 3

Midline:  $y = -1$

pattern:  
point every  $\frac{2\pi}{4} = \frac{\pi}{2}$

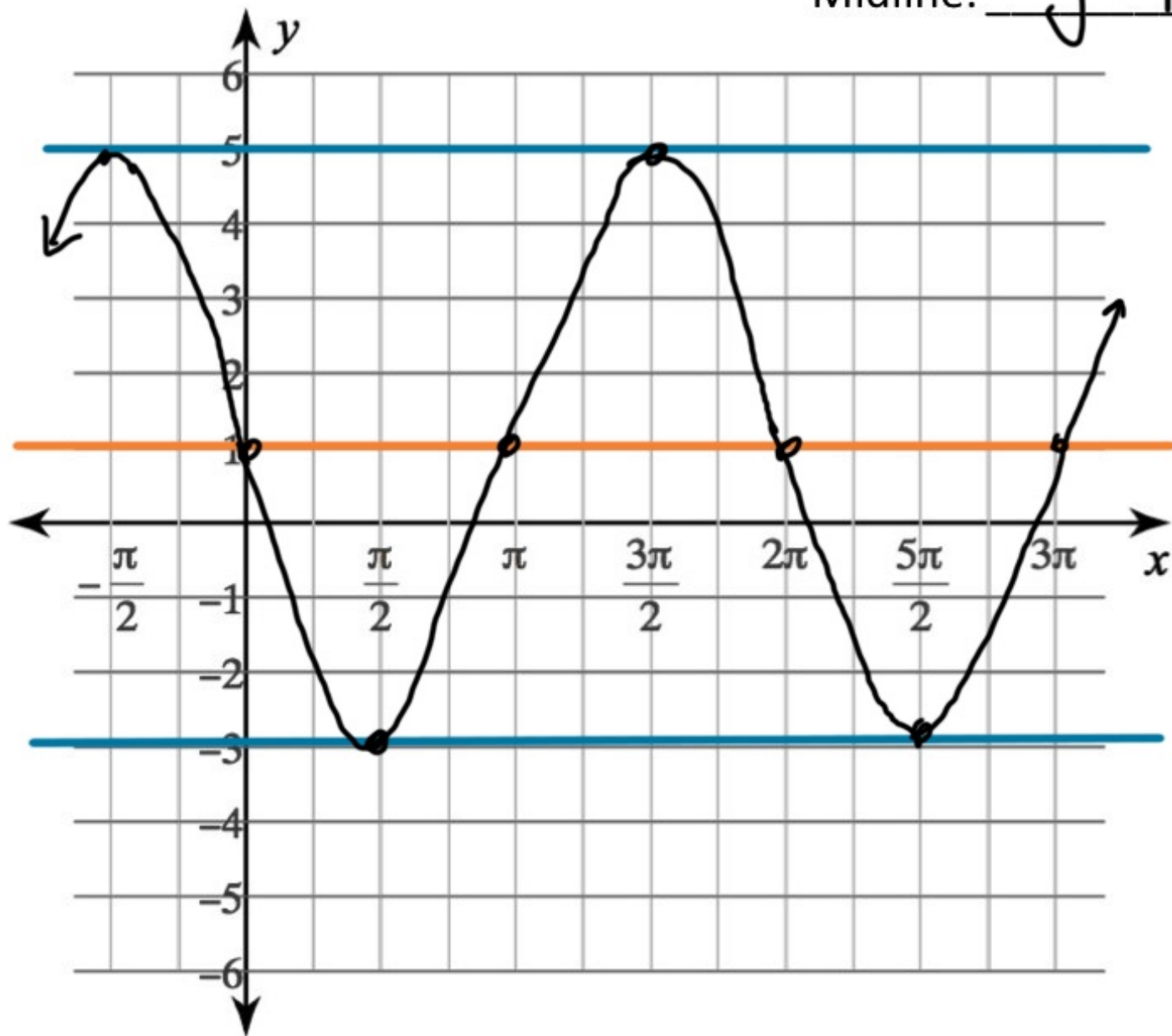


midline

F.  $y = \textcircled{-4}^{\text{flip!}} \sin \theta + 1$

Amplitude: 4

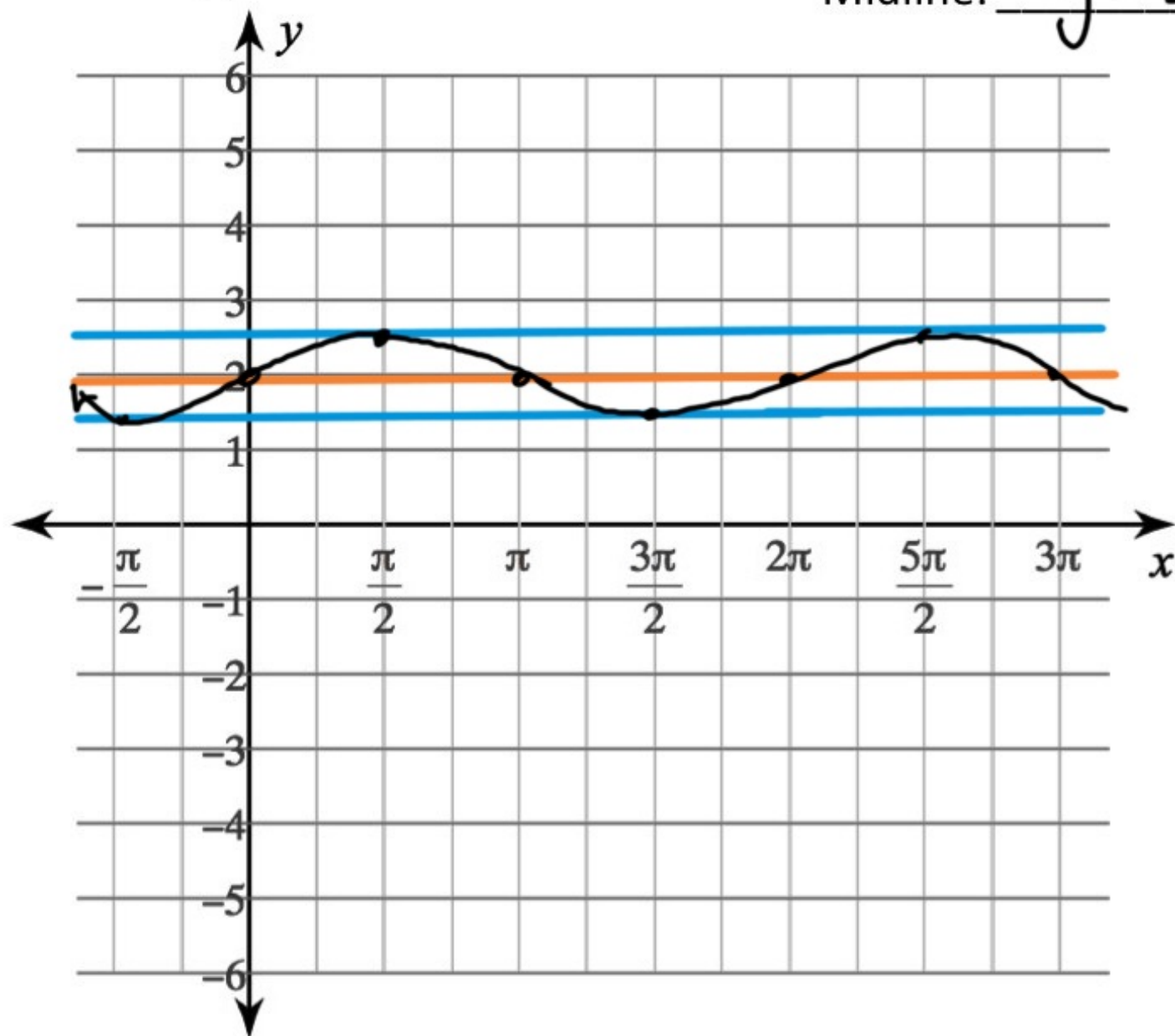
Midline:  $y = 1$



G.  $y = \frac{1}{2} \sin \theta + 2$

Amplitude:  $\frac{1}{2}$

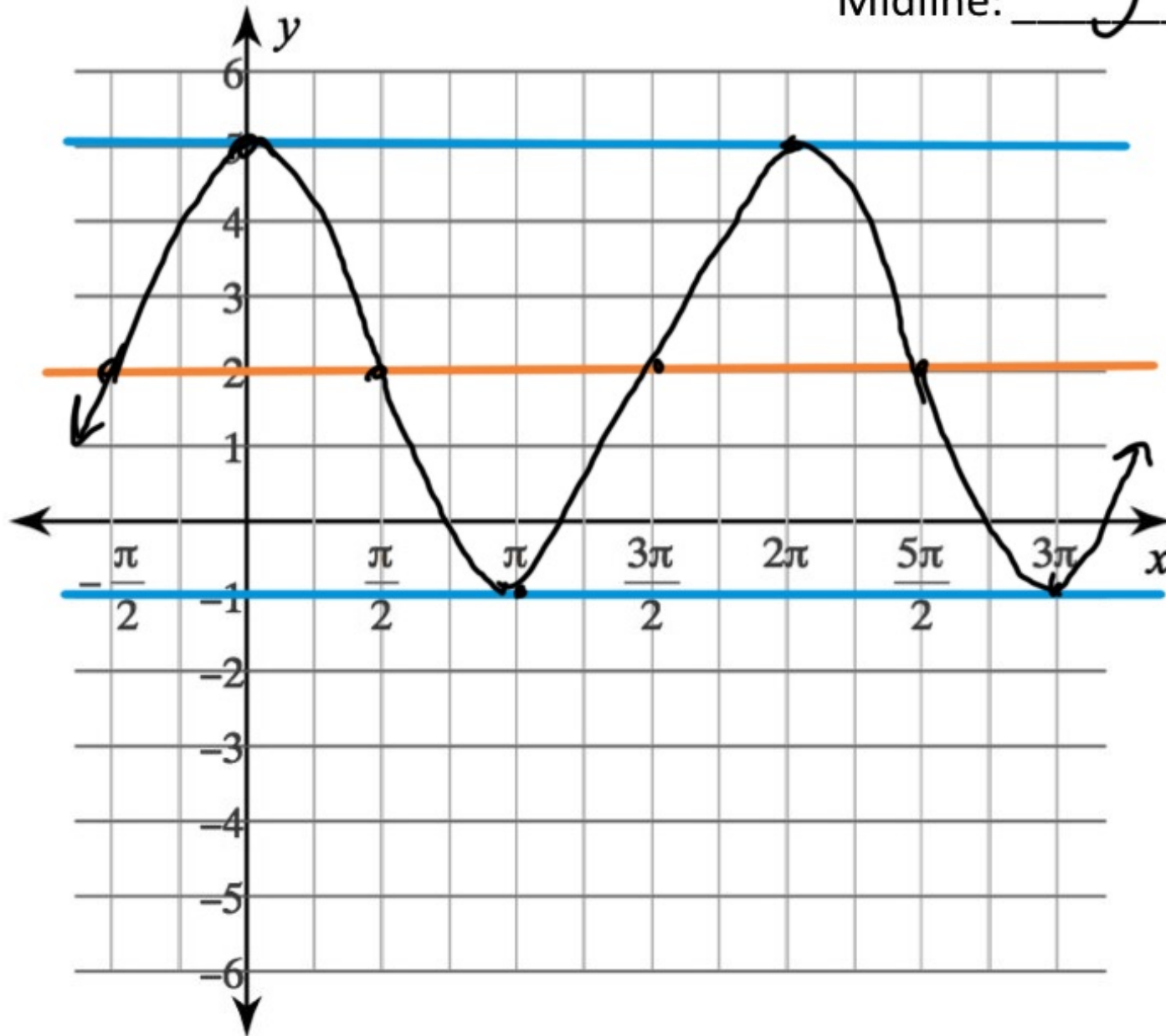
Midline:  $y = 2$



H.  $y = 3 \cos \theta + 2$

Amplitude: 3

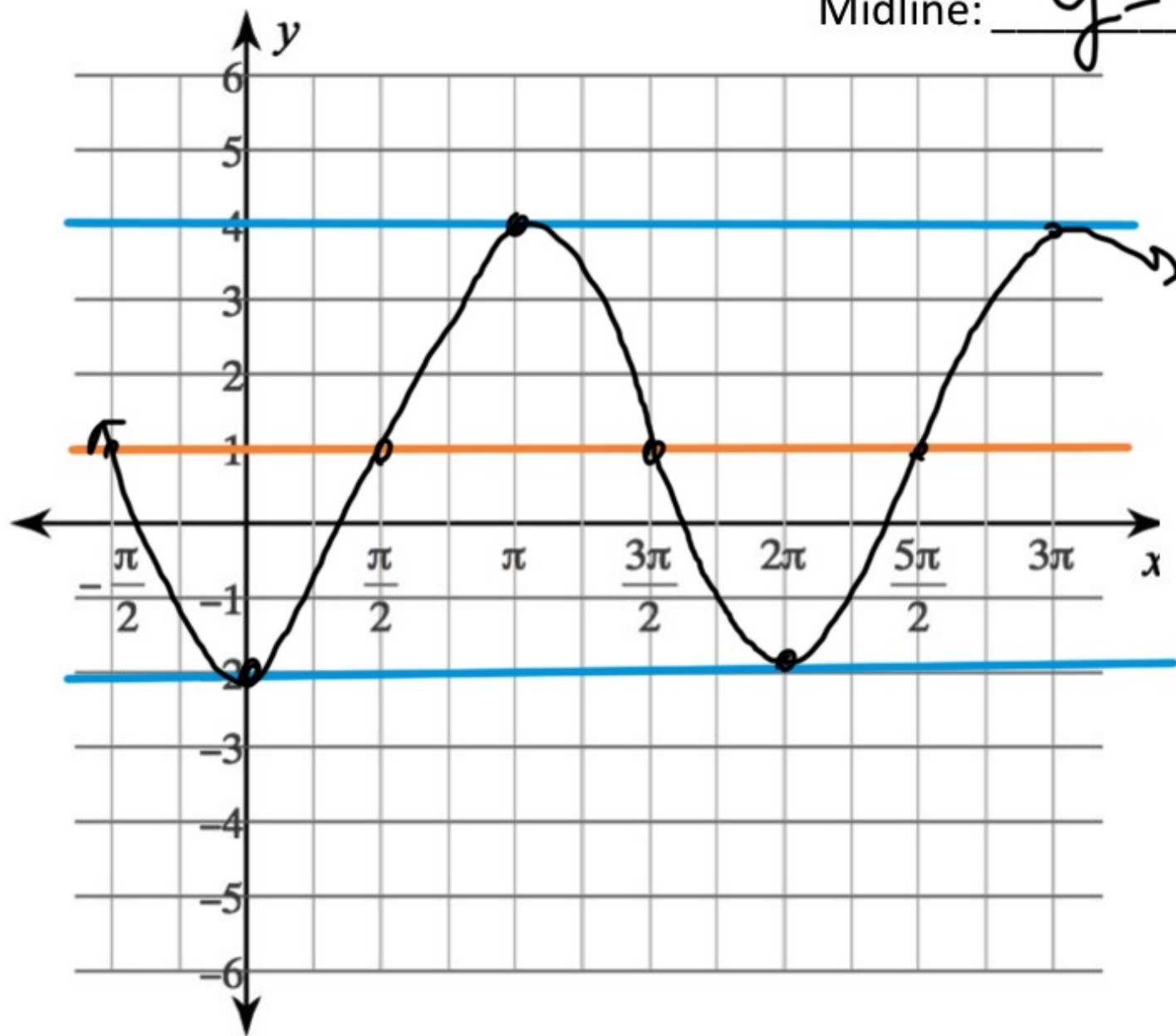
Midline:  $y = 2$



I.  $y = -3 \cos \theta + 1$

Amplitude: -3

Midline:  $y = 1$





J.  $y = 2 \cos \theta + 2$

Amplitude: 2

Midline:  $y = 2$

Domain:  
 $(-\infty, \infty)$

Range:  
 $[0, 4]$

