Find the period and amplitude.

A. period = 4 amplitude = 6

B. period = 4 amplitude = 2

C. period = 6 amplitude = 3/2

Graph over one period. List the amplitude, period, x-intercepts and the intervals (in the period) on which the function increases. Use the amplitude and period to get the box.

D. \( y = -\sin 2x \)
   - amplitude = 1
   - period = \( \pi \)
   - x-intercepts: 0, \( \pi/2 \), \( \pi \)
   - increases on: [\( \pi/4 \), 3\( \pi/4 \)]

E. \( y = 2\cos 2x \)
   - amplitude = 2
   - period = \( \pi \)
   - x-intercepts: \( \pi/4 \), 3\( \pi/4 \)
   - increases on: [\( \pi/2 \), \( \pi \)]

Find an equation for the graph of the form \( y = \pm A\sin(Bx) \) or \( y = \pm A\cos(Bx) \) with \( B > 0 \). 2 B's involve \( \pi \), all are fractions.

H. \( y = \frac{3}{2} \sin(3x/2) \)

Since \( \pi/3 \) is at the one quarter point, the endpoint of the period is at 4\( \pi/3 \). Thus the period \( p = 4\pi/3 \). Since \( 3/2 \) is the high point, the amplitude is \( A = 3/2 \). Now \( B = 2\pi/p = 2\pi/(4\pi/3) = 2\pi(3/4\pi) = 3/2 \).

Since the graph starts at 0 and goes up, it is sin rather than cos, -sin or -cos.

I. \( y = \cos(2\pi x/5) \)
   - (5,1)

J. \( y = \pi \cos(\pi x/4) \)
   - (4, -\pi)

Note, the amplitude \( A \) is \( \pi \), not \( -\pi \). Amplitudes and periods are always positive. 4 occurs halfway through the period, hence the period is 8 and \( B = 2\pi/p = 2\pi/8 = \pi/4 \).