**Section 5.6:** Sinusoidal Graphs

**Theorem:** If $y = A\sin(Bx + c)$ *or* $y = A\cos(Bx + c)$ for none zero real numbers A and B, then

Amplitude =

Period =

Phase Shift =

**EX:** Find the Amplitude, Period, and the Phase Shift for the following functions:

1) $y = -8\sin(3x - \pi)$

2) $y = 2\cos(-2x + \frac{\pi}{2})$

3) $y = 4\sin(\frac{1}{3}x - \frac{\pi}{6})$

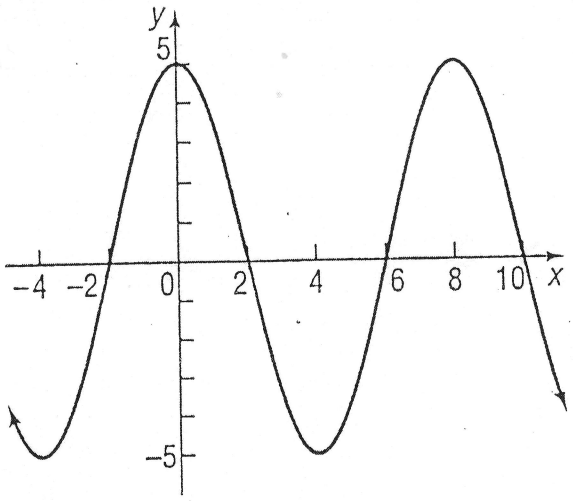
4) $y = -3\cos(2x + \frac{\pi}{3})$

**EX:** Graph

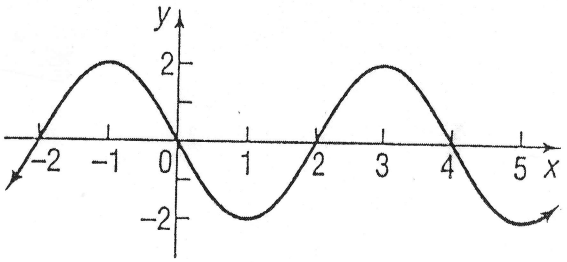
$$y = -\sin(2x + \frac{\pi}{2})$$

*In Problems* **1-4**, *find an equation for each graph.*

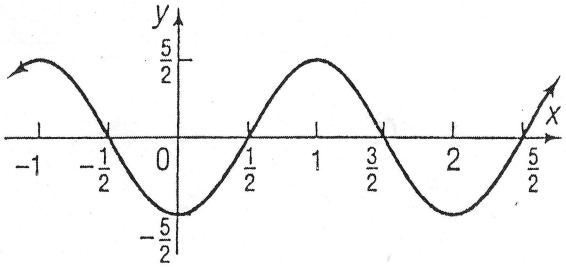
**1.**




**2.**




**3.**




**4.**