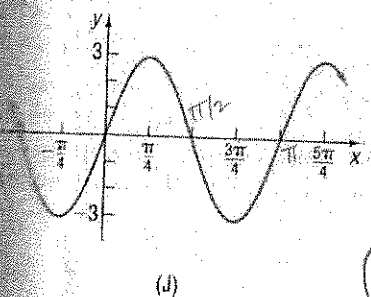
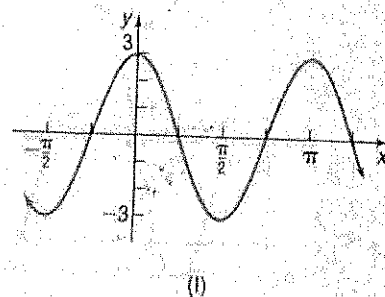
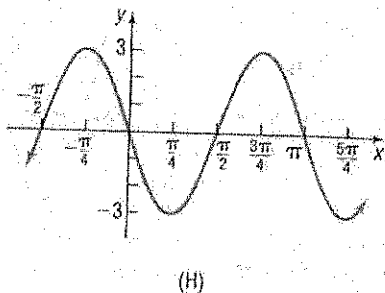
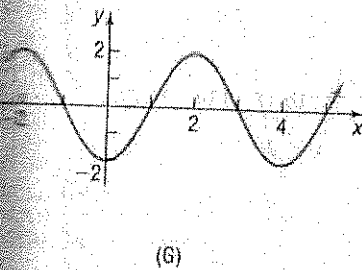
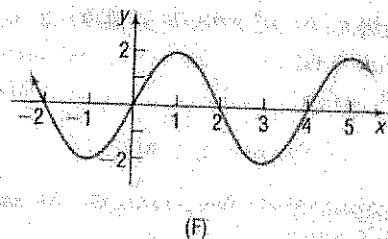
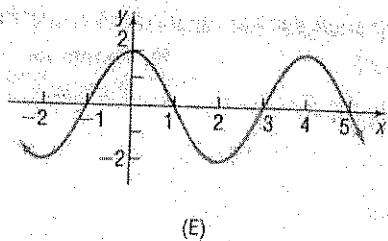
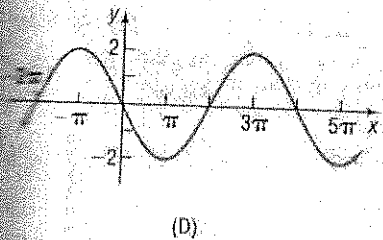
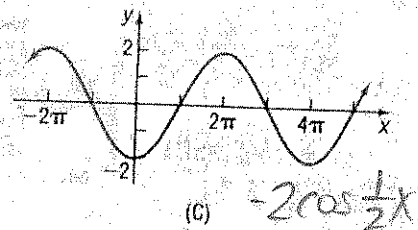
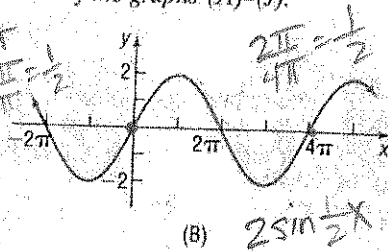
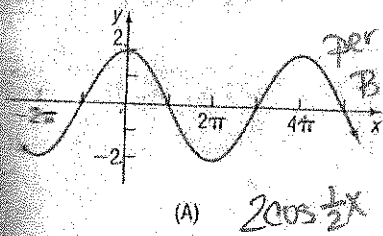


Graph the original cycle in one color and then fill in the entire grid. Identify the domain, range, amplitude, period, phase shift, and vertical shift.

- 1) $y = 2\sin 2x + 1$
 Amp = 2 period = π
 P.S. none V.S. up 1
- 2) $y = -3\cos 3(x - \frac{\pi}{2}) - 1$
 Amp = 3 period = $\frac{2\pi}{3}$
 P.S. rt $\frac{\pi}{2}$ V.S. down 1
- 3) $y = \frac{1}{2}\sin \frac{1}{2}x$
 Amp = $\frac{1}{2}$ Period = 4π
 P.S. none V.S. none
- 4) $y = -\sin 2(x + \frac{\pi}{3}) + 3$
 Amp = 1 period = π
 P.S. = $\frac{\pi}{3}$ left V.S. = up 3
- 5) $y = 2\cos(2x + \frac{\pi}{3})$
 Amp = 2 period = π
 P.S. = $\frac{\pi}{6}$ left V.S. none
- 6) $y = \sin(3x + \pi)$
 Amp = 1 period = $\frac{2\pi}{3}$
 P.S. = left $\frac{\pi}{3}$ V.S. none
- 7) $y = 3\sin(2x + 5\pi)$
 Amp = 3 period = π
 P.S. $5\pi/2$ left V.S. none
- 8) $y = -\cos 3x - 2$
 Amp = 1 period = $\frac{2\pi}{3}$
 P.S. none V.S. = down 2
- 9) $y = \sin(2x + \frac{4\pi}{3}) + \frac{1}{2}$
 Amp = 1 period = π
 P.S. $\frac{2\pi}{3}$ left V.S. up $1/2$

Problems 29-38, match the given function to one of the graphs (A)-(J).



29. $y = 2\sin(\frac{\pi}{2}x)$ (E)
30. $y = 2\cos(\frac{\pi}{2}x)$ (A)
31. $y = 2\cos(\frac{1}{2}x)$ (A) Amp = 2 Per = 4π
32. $y = 3\cos(2x)$ (I)
33. $y = -3\sin(2x)$ (H)
34. $y = 2\sin(\frac{1}{2}x)$ (B)
35. $y = -2\cos(\frac{1}{2}x)$ (C)
36. $y = -2\cos(\frac{\pi}{2}x)$ (G)
37. $y = 3\sin(2x)$ (J)
38. $y = -2\sin(\frac{1}{2}x)$ (D)

Problems 39-42, match the given function to one of the graphs (A)-(D).

