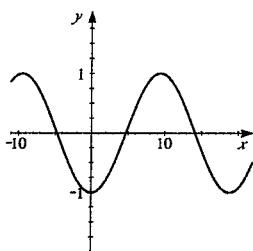


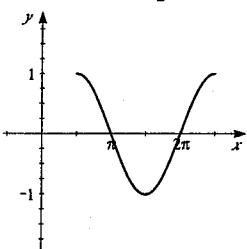
15.  $y = -\cos \frac{1}{3}x$

amplitude = 1, period =  $6\pi$



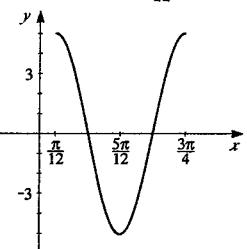
19.  $y = \cos(x - \frac{\pi}{2})$

amplitude = 1, period =  $2\pi$ ,  
phase shift =  $\frac{\pi}{2}$



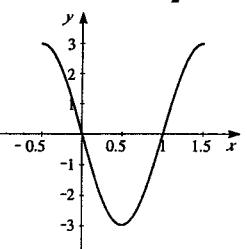
23.  $y = 5 \cos(3x - \frac{\pi}{4}) = 5 \cos 3(x - \frac{\pi}{12})$

amplitude = 5, period =  $\frac{2\pi}{3}$ ,  
phase shift =  $\frac{\pi}{12}$



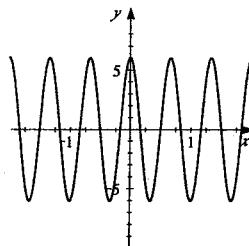
27.  $y = 3 \cos \pi(x + \frac{1}{2})$

amplitude = 3, period = 2,  
phase shift =  $-\frac{1}{2}$



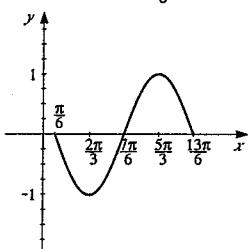
17.  $y = 3 \cos 3\pi x$

amplitude = 3, period =  $\frac{2}{3}$



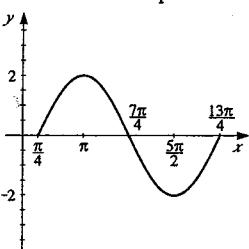
21.  $y = -2 \sin\left(x - \frac{\pi}{6}\right)$

amplitude = 2, period =  $2\pi$ ,  
phase shift =  $\frac{\pi}{6}$



25.  $y = 2 \sin(\frac{2}{3}x - \frac{\pi}{6}) = 2 \sin \frac{2}{3}(x - \frac{\pi}{4})$

amplitude = 2, period =  $3\pi$ ,  
phase shift =  $\frac{\pi}{4}$



29.  $y = -\frac{1}{2} \cos(2x - \frac{\pi}{3}) = -\frac{1}{2} \cos 2(x - \frac{\pi}{6})$

amplitude =  $\frac{1}{2}$ , period =  $\pi$ ,  
phase shift =  $\frac{\pi}{6}$

