

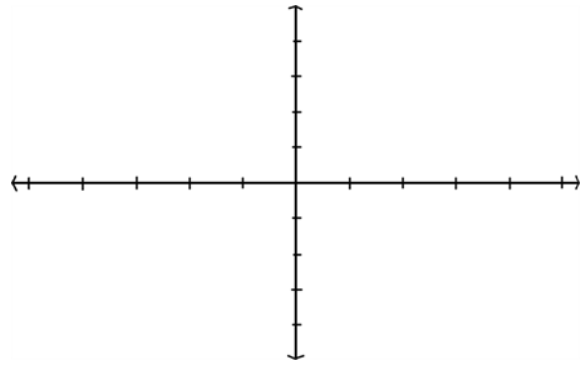
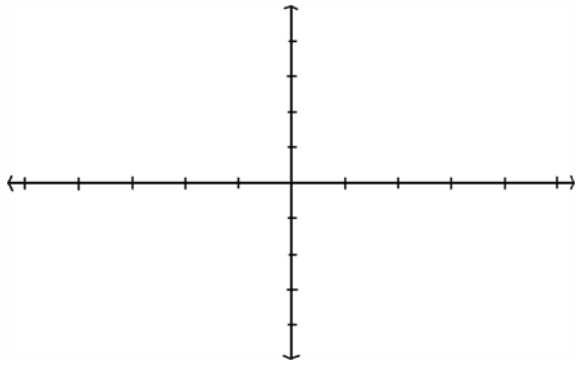
Graph at least one period of each of the following functions. List the period and amplitude (or “amplitude” of appropriate reference points), draw the unshifted function  $y = af(bx)$  with a dotted line, and draw the final graph with a dark line or color. Completed graphs must have labels on both x- and y-axes.

1.  $y = \tan\left(\pi x + \frac{3\pi}{4}\right)$  per:

amp:

2.  $y = \cot\left(\frac{1}{3}x - \frac{\pi}{2}\right)$  per:

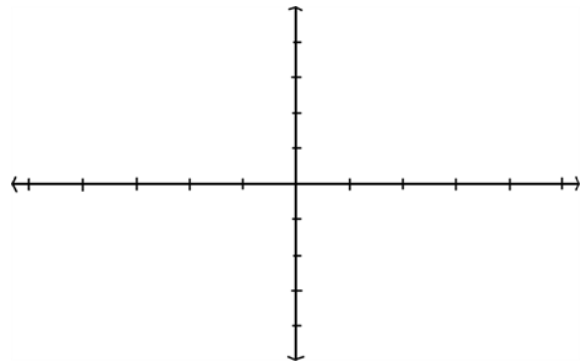
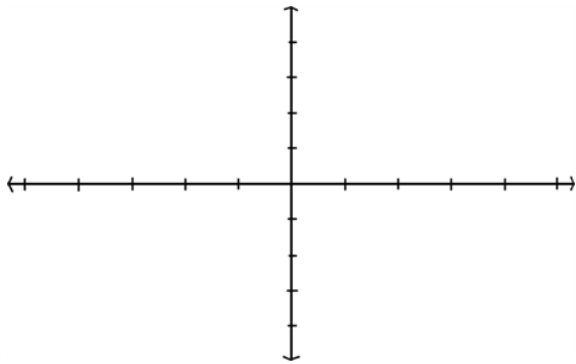
amp:



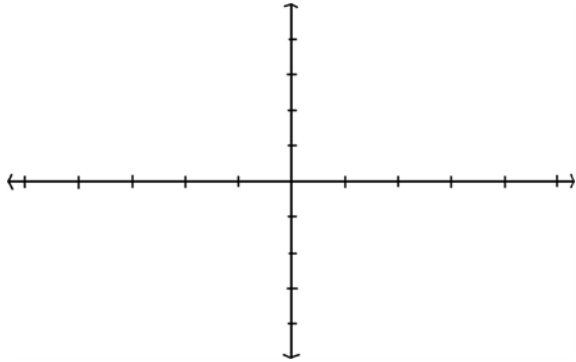
3.  $y = -\frac{1}{3}\csc x - \frac{2}{3}$  per:

amp:

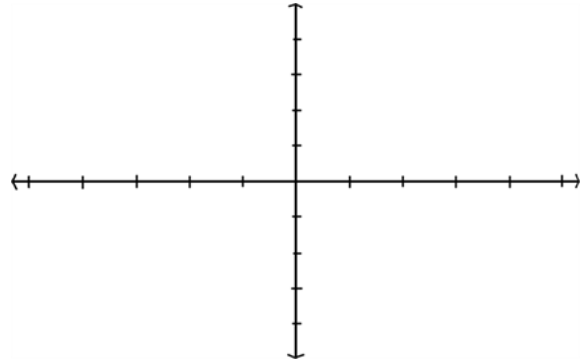
4.  $y = -\sec\left(x - \frac{\pi}{2}\right) + 1$  per: amp:



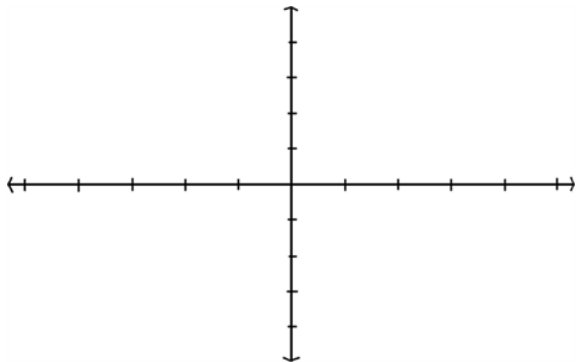
5.  $y = 2 \cos\left(x + \frac{\pi}{2}\right)$  per: amp:



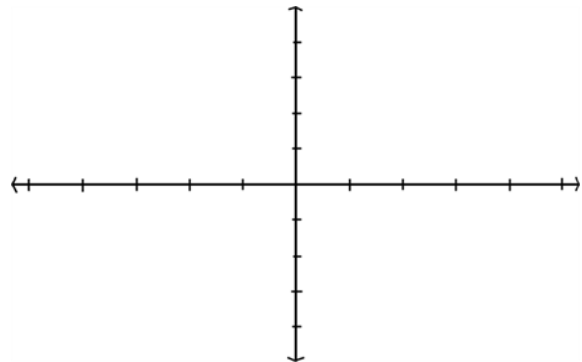
6.  $y = -\frac{1}{2} \sin \pi x - 1$  per: amp:



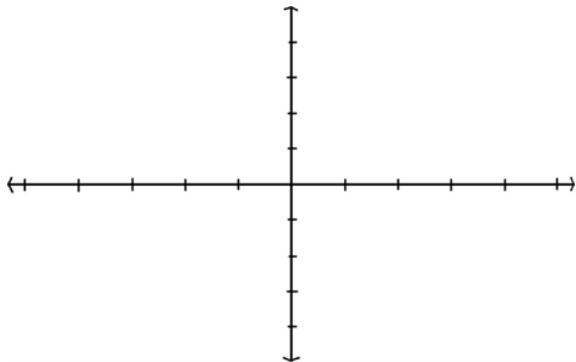
7.  $y = -3 \cot\left(\frac{1}{2}x - \frac{\pi}{4}\right)$  per: amp:



8.  $y = \sec\left(2x + \frac{\pi}{2}\right) + 3$  per: amp:



9.  $y = 2 \sin\left(\frac{\pi}{4}x + \frac{\pi}{2}\right) - 1$  per: amp:



10.  $y = 3 \cos x - 2 \sin x$

