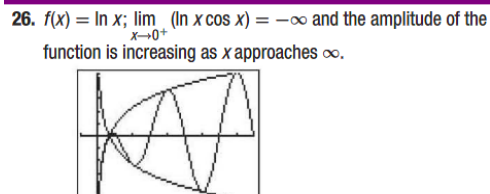
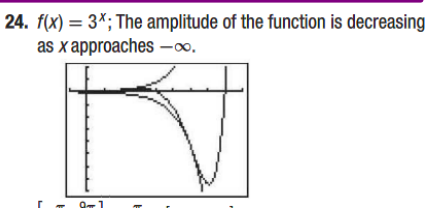
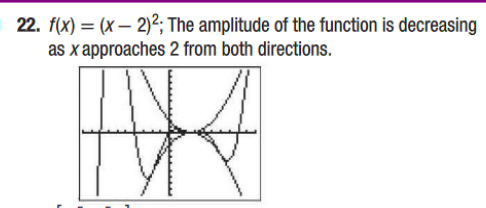
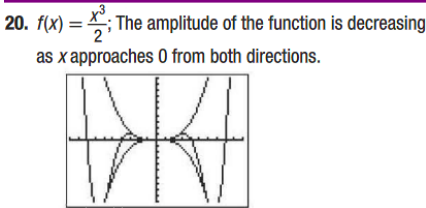
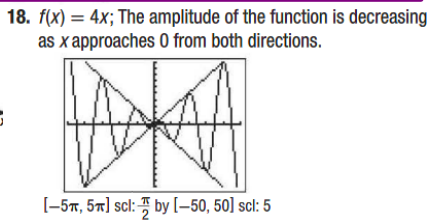
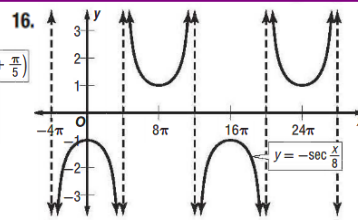
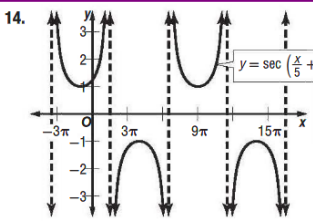
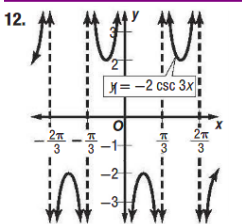
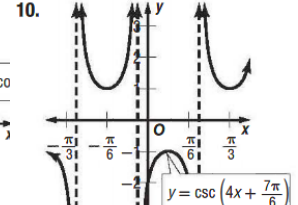
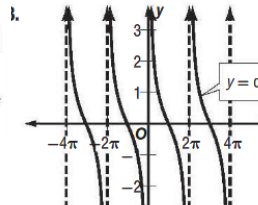
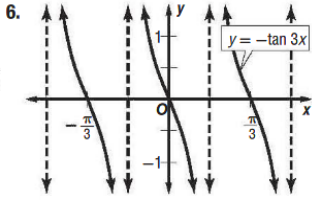
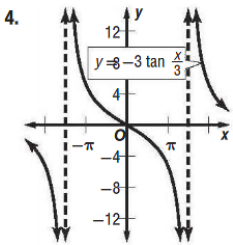
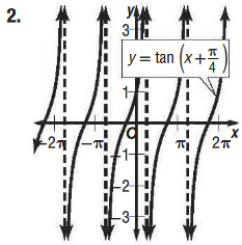
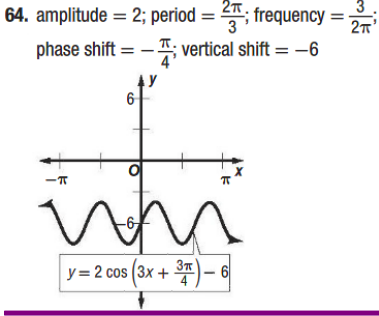


Key HW5 p277-79#2-28even,60,64-78even PC C4



28.a. Sample answer:  
 $y = 20.3e^{-0.901t} \cos 12\pi t$   
b. about 4.09 seconds

60. Arturo; sample answer: The graph of  $y = \cot x$  has no  $y$ -intercept, while the graph of  $y = \tan x$  has a  $y$ -intercept of 0. Because neither of the equations in the problem indicates a horizontal shift of the parent function and the curve of the graph does not pass through the origin, Mira's answer must be incorrect. Also, using the skills learned in this lesson, Arturo's equation has a period of  $\frac{\pi}{2}$ , asymptotes at  $x = 0$  and  $x = \frac{\pi}{2}$ ,  $x$ -intercepts  $-\frac{\pi}{4}$  and  $\frac{\pi}{4}$ , and intermediate points  $(\frac{\pi}{8}, \frac{1}{3})$  and  $(\frac{3\pi}{8}, -\frac{1}{3})$ , which all match the graph.



66.  $\cos \theta = \frac{3}{5}$ ,  $\tan \theta = \frac{4}{3}$ ,  
 $\csc \theta = \frac{5}{4}$ ,  $\sec \theta = \frac{5}{3}$ ,  
 $\cot \theta = \frac{3}{4}$

68.  $\sin \theta = \frac{24}{25}$ ,  $\cos \theta = \frac{7}{25}$ ,  
 $\csc \theta = \frac{25}{24}$ ,  $\sec \theta = \frac{25}{7}$ ,  
 $\cot \theta = \frac{7}{24}$

70. 324 hours  
72.  $(x - 4)(x + 1)(x + 4)$   
74.  $0.6(220 - a) \leq r \leq 0.9(220 - a)$   
76. J  
78. G