(16) max 15.03

min 9.33

b. Ampl. $= \frac{15.03-9.33}{2} = 2.85$

c. V.S. $= \frac{15.03+9.33}{2} = 12.18$

d. Per $= 12 \longrightarrow 12 = \frac{2\pi}{k}$ $\quad k = \frac{\pi}{6}$

e. $15.03 = 2.85 \sin\left(\frac{\pi}{6}(6) - c\right) + 12.18$

$-12.18 \qquad\qquad -12.18$

$\frac{2.85}{2.85} = \frac{2.85 \sin(\pi - c)}{2.85}$

$1 = \sin(\pi - c)$

$\sin^{-1}(1) = \pi - c$

$\frac{\pi}{2} = \pi - c$

$c = \pi - \frac{\pi}{2} = \frac{\pi}{2} \approx 1.57$

$y = 2.85 \sin\left(\frac{\pi}{6}t - 1.57\right) + 12.18$

$y = A\cos(kt)$

$y = -3.5\cos\left(\frac{2\pi}{5}t\right)$

$\frac{14 \text{ rev}}{60 \text{ sec}} \qquad \frac{60 \text{ sec} \div 14}{14 \text{ rev} \div 14} \frac{30/7 \text{ sec}}{1 \text{ rev}} = \text{Period}$

$\frac{30}{7} = \frac{2\pi}{k}$

$k = 2\pi \cdot \frac{7}{30} = \frac{14\pi}{30} = \frac{7\pi}{15}$