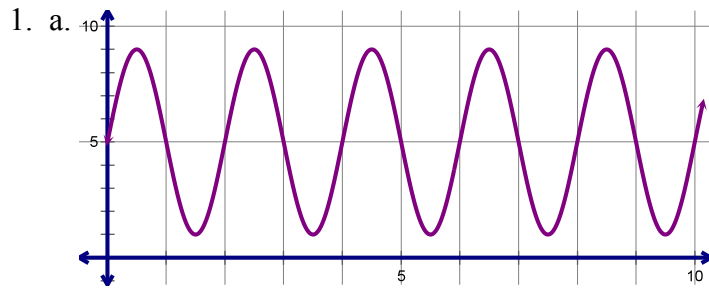
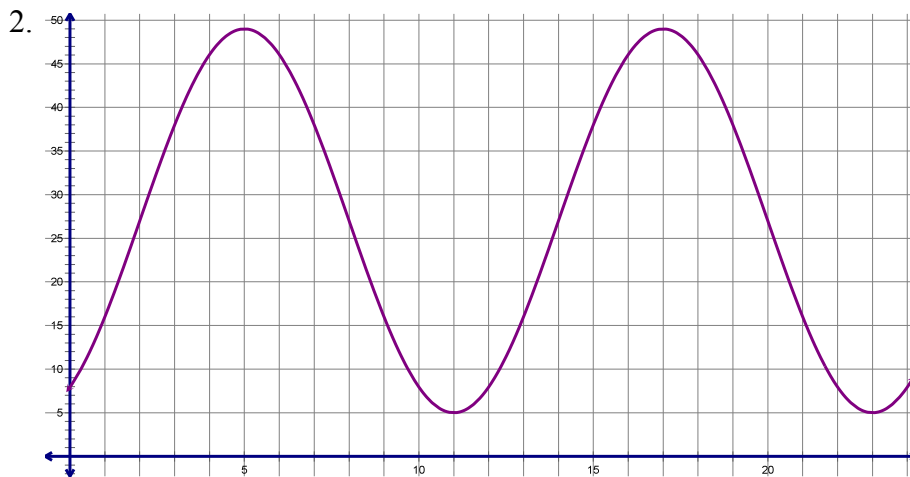


More Sinusoidal Modeling – Answers



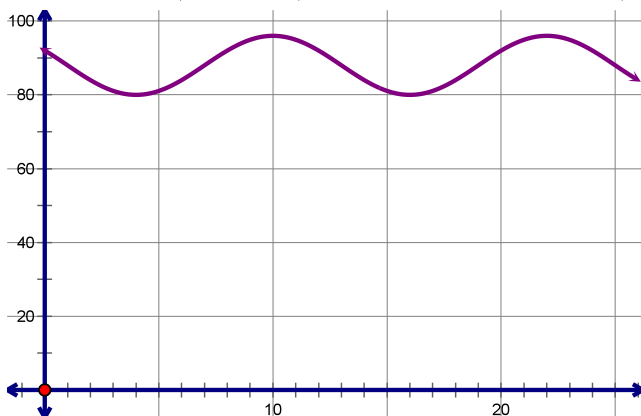
- b. maximum height of 9 feet after 0.5 seconds
 c. minimum height of 1 foot after 1.5 seconds
 d. 1 second



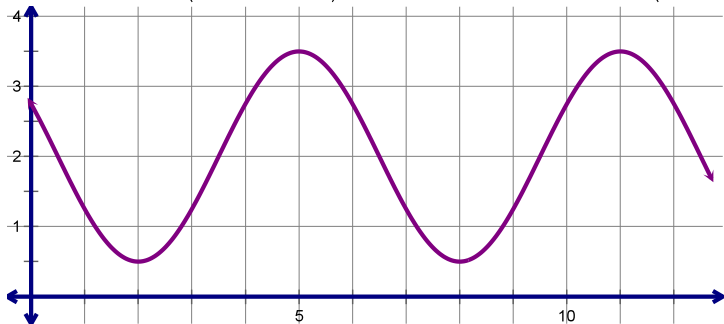
- b. lowest point is at 5 feet
 highest point is at 49 feet
 c. 24 seconds

3. a. $m(t) = 8 \sin\left(\frac{\pi}{6}(t-7)\right) + 88$ or $m(t) = 8 \cos\left(\frac{\pi}{6}(t-10)\right) + 88$

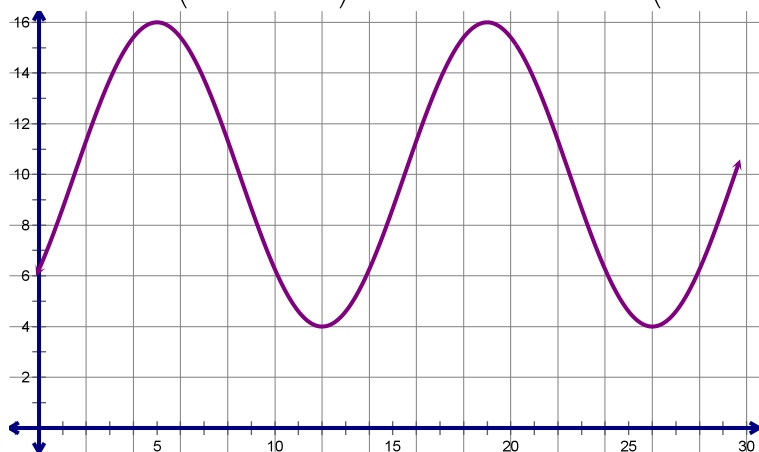
b. \$88 billion



4. a. $a(t) = 1.5 \sin\left(\frac{\pi}{3}(t-3.5)\right) + 2$ or $a(t) = 1.5 \cos\left(\frac{\pi}{3}(t-5)\right) + 2$ b. 3.5 liters



5. a. $d(t) = 6 \sin\left(\frac{\pi}{7}(t-15.5)\right) + 10$ or $d(t) = 6 \cos\left(\frac{\pi}{7}(t-5)\right) + 10$ b. 12:00pm
c. 4 feet



6. a. $h(t) = 15 \sin\left(\frac{\pi}{8}(t-5)\right) + 23$ or $h(t) = 15 \cos\left(\frac{\pi}{8}(t-9)\right) + 23$ b. 21 seconds
c. 23 cm

