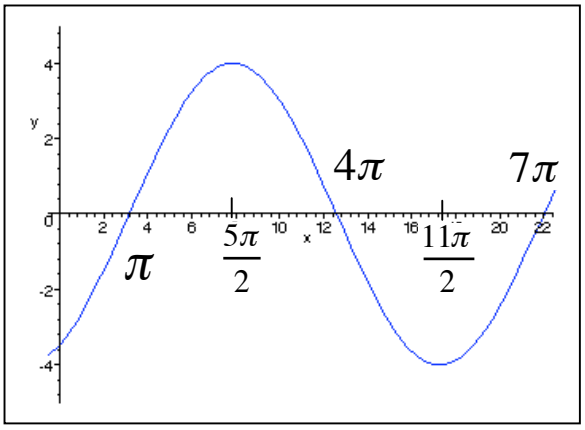
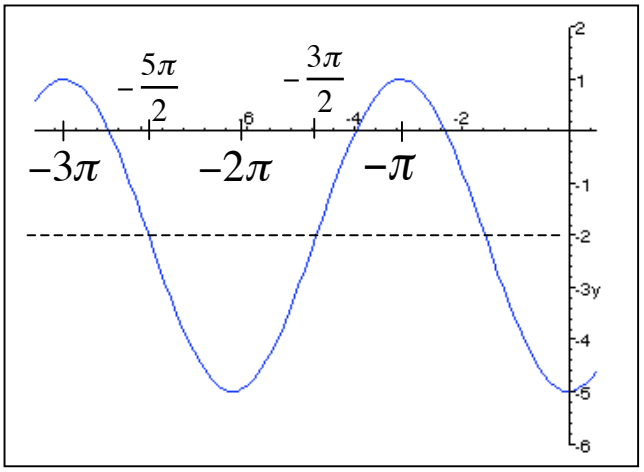
SECTION 6.5

32.



38.



42. (a) amp = 3, per = π,
phase shift = – π/4

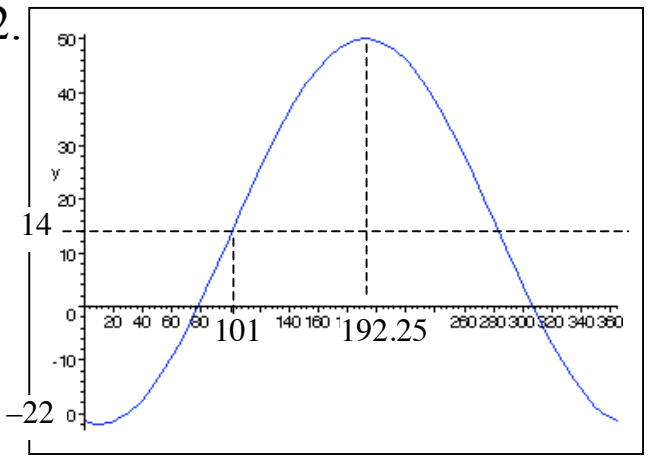
(b) $y = 3\sin\left(2x + \frac{\pi}{2}\right)$

44. (a) amp = 3, per = 1,
phase shift = – 1/4

(b) $y = 3\sin\left(2\pi x + \frac{\pi}{2}\right)$

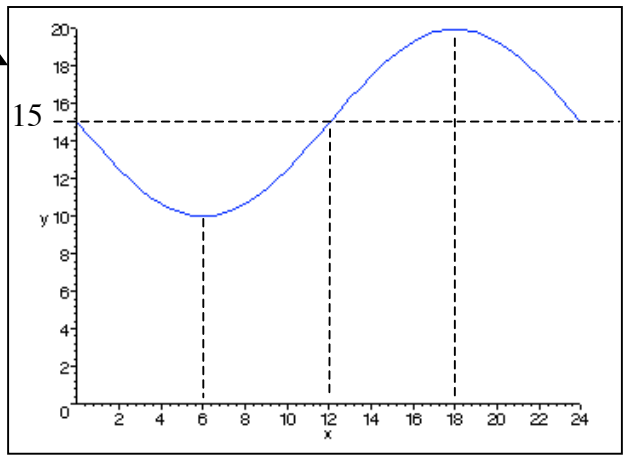
46. $I = 510\sin\left(\frac{\pi}{12}t\right)$

52.



52.(b) **January 11**, (t = 9.75 ≈ 10)

54. $a = 5$, $b = \pi/12$, $c = -\pi$, $d = 15$



SECTION 6.7

2. $\alpha = 45^0$, $a = 35$, $c = 35\sqrt{2}$
4. $\alpha = 30^0$, $a = 3\sqrt{3}$, $b = 3$
6. $\alpha = 60^0$, $\beta = 30^0$, $b = 4$
8. $\alpha = 45^0$, $\beta = 45^0$, $a = 7\sqrt{2}$
10. $\alpha = 25^0\,40'$, $b \approx 41.8$, $c \approx 46.4$
12. $\beta = 58^0\,50'$, $b \approx 843$, $c \approx 985$
14. $\alpha \approx 74^0$, $\beta \approx 16^0$, $c \approx 32$
16. $\alpha \approx 38^0$, $\beta \approx 52^0$, $b \approx 0.53$
18. $b = c\sin\beta$ 20. $a = b\tan\alpha$ 26. ≈ 6.1 meters

SECTION 6.7

32. ≈ 5.76 minutes

34. ≈ 108.1 feet

44. $\approx 45.5°$

46. (a) ≈ 7.49 feet, (b) ≈ 1.51 feet

48. ≈ 30.1 meters

50. ≈ 22.6 feet