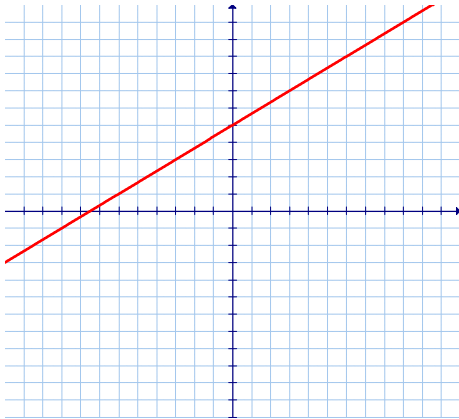


PRECALCULUS REVIEW

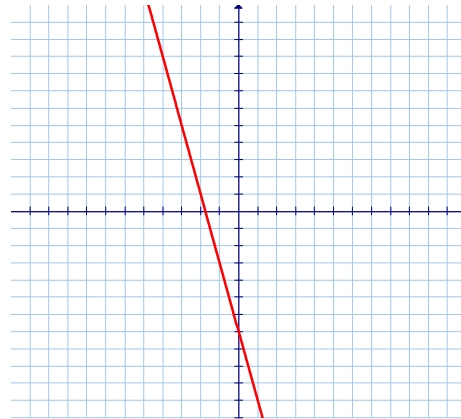
PART 1: LINEAR & QUADRATIC FUNCTIONS

SOLUTIONS

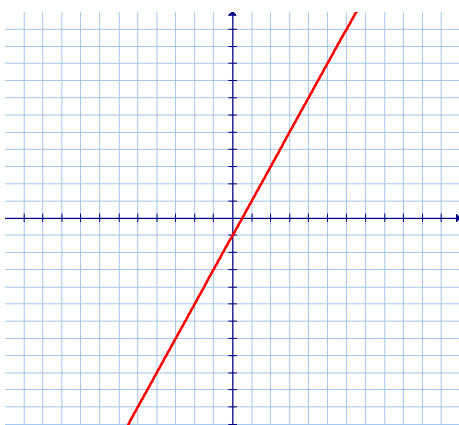
1.



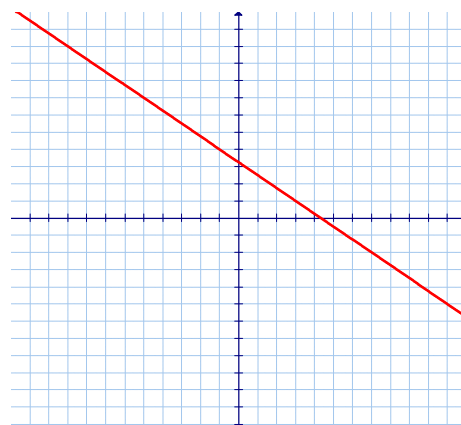
2.



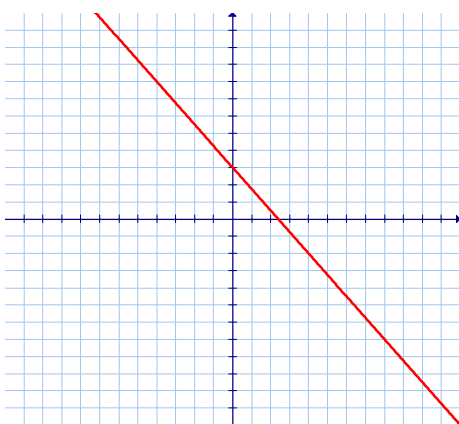
3.



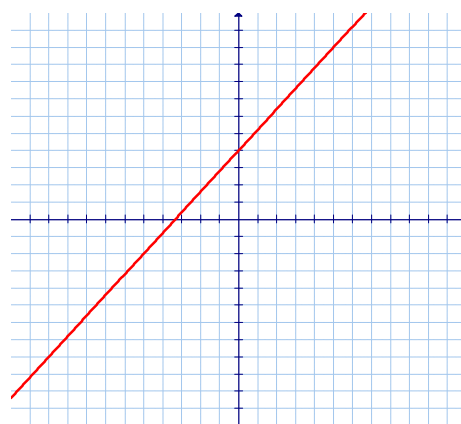
4.



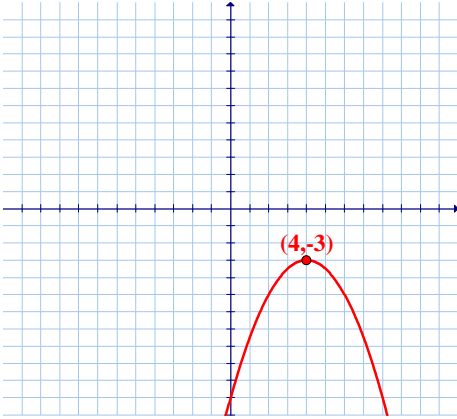
5.



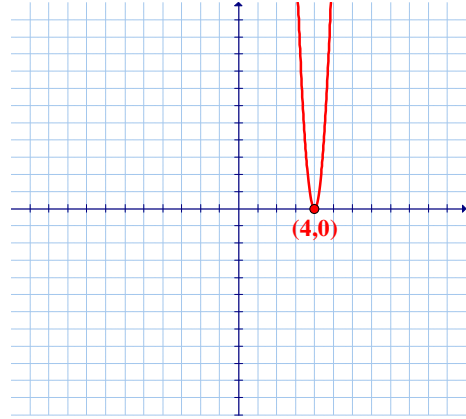
6.



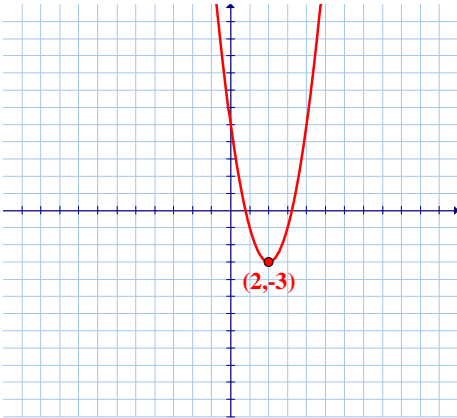
7.



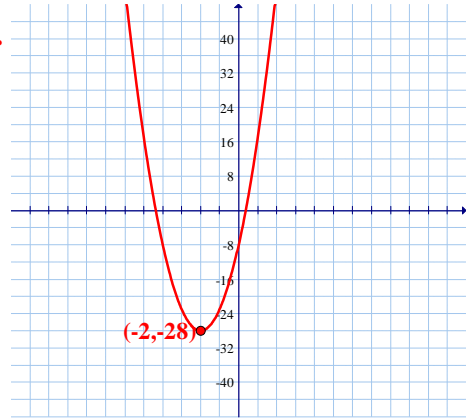
8.



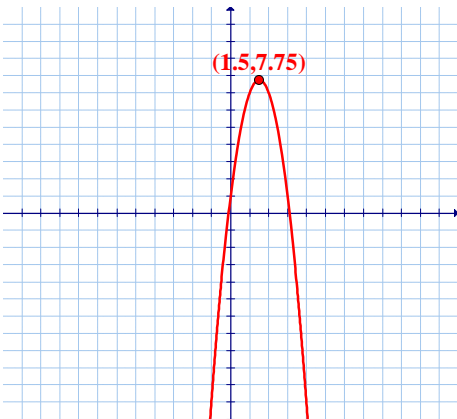
9.



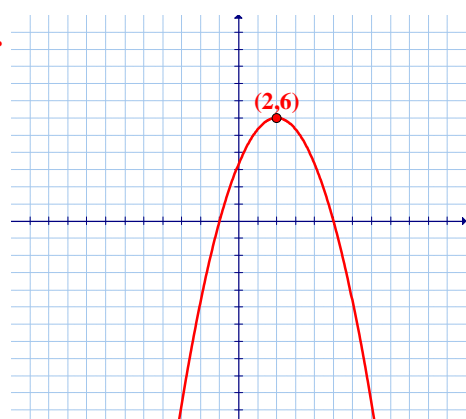
10.



11.



12.



[Note for #13-18, there are numerous answers. These are the answers that come directly from the given information.]

13. $y - 1 = \frac{3}{4}(x + 7)$

14. $y + 4 = -5(x - 6)$

15. $y - 4 = x - 1$ -or- $y - 1 = x + 2$

16. $y + 3 = \frac{1}{2}(x - 5)$ -or- $y + 7 = \frac{1}{2}(x + 3)$

17. $y - 11 = -\frac{3}{4}(x - 5)$

18. $y + 3 = -\frac{2}{3}(x + 2)$

19. $y = -\frac{1}{3}x - 2$

20. $y = 4x + 2$

21. $y = -\frac{10}{9}x - \frac{1}{3}$

22. $y = \frac{1}{3}x + \frac{20}{3}$

23. $y = \frac{3}{4}x + 6$

24. $y = -\frac{5}{2}x + 8$

25. $x^2 + 3x - 28$

26. $4x^2 + 29x - 24$

27. $4x^2 - 25$

28. $35x^2 - 58x + 24$

29. $9x^2 - 12x + 4$

30. $4x^2 + 28x + 49$

31. $(x + 6)(x - 1)$

32. $(x - 6)(x - 4)$

33. cannot be factored

34. $(a - 10)(a + 2)$

35. cannot be factored

36. $(b + 7)(b + 8)$

37. Technically, the answer is

38. $(4x - 7)(6x - 5)$

$$\left(x + \frac{7 + \sqrt{849}}{20}\right)\left(x + \frac{7 - \sqrt{849}}{20}\right)$$

39. $4(2x + 5)(2x - 5)$

40. cannot be factored

41. $x = \frac{5}{3}$

42. $x = 2$

43. $x = 32$

44. $x = 12$ or $x = 2$

45. $x = \pm\sqrt{8} = \pm 2\sqrt{2}$

46. $x = \pm 3$

47. $x = 6$ or $x = 2$

48. $x = -2$ or $x = \frac{1}{2}$

49. $x = \frac{2}{5} \pm \frac{\sqrt{5}}{5}$

50. $x = 4$ or $x = -1$

51. $5\frac{5}{7}$ gallons

52. $7.5 \text{ ft} \times 15 \text{ ft}$

53. (A) 80 mph (B) 240 miles

54. The sides of the square were each 4 ft in length.

55. The radius should be increased by $-10 + \sqrt{105}$ inches ≈ 0.247 inches