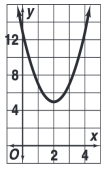
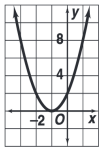
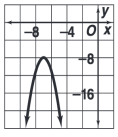
Homework Answers - Section 5.3, p. 255

3. 

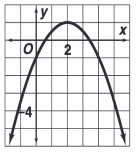
$x = 2$

4. 

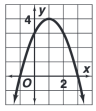
$x = -1$

5. 

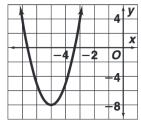
$x = -7$

6. 

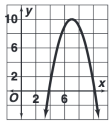
$x = 2$

9. 

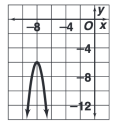
$x = 1$

10. 

$x = -5$

11. 

$x = 7$

12. 

$x = -8$

13. $y = \frac{1}{4}x^2$

14. $y = -x^2 + 4$

15. $y = -(x - 2)^2$

16. $y = -(x + 2)^2$

17. $y = (x - 2)^2$

18. $y = -2x^2$

19. $y = 6(x + 3)^2 - 2$

20. $y = -(x - 1)^2 + 2$

21. $(-20, 0), -600$

22. $(3.2, 0), 1.024$

23. $(-5.5, 0), 726$

24. $(-1, -1), -0.9965$

27. $y = (x - 2)^2 + 2$

28. $y = (x + 1)^2 + 4$

29. $y = 6x^2 - 10$

30. $y = -5x^2 + 12$

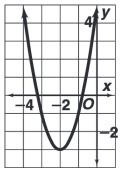
31. $y = 4\left(x + \frac{7}{8}\right)^2 - \frac{49}{16}$

32. $y = 2\left(x + \frac{1}{4}\right)^2 - \frac{1}{8}$

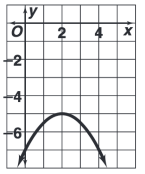
33. $y = 4\left(x - \frac{5}{4}\right)^2 + \frac{71}{8}$

34. $y = -2(x - 2)^2 + 11$

35. $y = \frac{9}{4}\left(x + \frac{2}{3}\right)^2 - 2$

36. 

$x = -2$

39. 

$x = 2$

42. a. All nonnegative numbers; a price cannot be negative; it would imply that the bakery pays people to take bread.

b. \$277.50; \$210.00

c. \$0.55

d. \$300.00

43. $y = -7(x - 1)^2 + 2$

44. $y = -\frac{4}{9}(x - 3)^2 + 6$

45. $y = -\frac{1}{2}(x + 3)^2 + 6$

46. $y = \frac{3}{2}(x + 2)^2 + 6$

47. $y = 7(x + 1)^2 - 4$

48. $y = -7x^2 + 5$

Once finished with checking your answers . . .

- Use a Chromebook and headphones
- Access the website www.numberworx.com
- Go to the Algebra 2 page and then the Chapter 5 page
- Watch "Section 5.4, Part 1 Video Lesson - Factoring Out the GCF"
- Do Problems 1 - 6 on page 263
- Watch "Section 5.4, Part 1 Video Lesson - Factoring Quadratics where a = 1"
- Do Problems 7 - 23 odds on page 263
- Watch "Section 5.4, Part 2 Video Lesson - Factoring Quadratics where a > 1"
- Do Problems 25, 28, 31, 41, 43 - 45 all, and 61 - 65 odds

Find the GCF of each expression. Then factor the expression.

1. $3a^2 + 9$ **2.** $25b^2 - 35$ **3.** $x^2 - 2x$

4. $5t^2 + 7t$ **5.** $14y^2 + 7y$ **6.** $27p^2 - 9p$

Factor each expression.

7. $x^2 + 3x + 2$ **8.** $x^2 + 5x + 6$ **9.** $x^2 + 7x + 10$

10. $x^2 + 10x + 16$ **11.** $y^2 + 15y + 36$ **12.** $x^2 + 22x + 40$

13. $x^2 - 3x + 2$ **14.** $x^2 - 13x + 12$ **15.** $r^2 - 11r + 18$

16. $x^2 - 10x + 24$ **17.** $d^2 - 12d + 27$ **18.** $x^2 - 13x + 36$

19. $x^2 - 5x - 14$ **20.** $x^2 + x - 20$ **21.** $x^2 - 3x - 40$

22. $c^2 + 2c - 63$ **23.** $x^2 + 10x - 75$ **24.** $t^2 - 7t - 44$

25. $3x^2 + 31x + 36$ **26.** $2x^2 - 19x + 24$ **27.** $5r^2 + 23r + 26$

28. $2m^2 - 11m + 15$ **29.** $5t^2 + 28t + 32$ **30.** $2x^2 - 27x + 36$

Factor each expression.

31. $3x^2 + 7x - 20$ **32.** $5y^2 + 12y - 32$ **33.** $7x^2 - 8x - 12$

34. $2z^2 + z - 28$ **35.** $3x^2 + 8x - 16$ **36.** $28k^2 + 13k - 6$

37. $x^2 + 2x + 1$ **38.** $t^2 - 14t + 49$ **39.** $x^2 - 18x + 81$

40. $4n^2 - 20n + 25$ **41.** $9x^2 + 48x + 64$ **42.** $81z^2 + 36z + 4$

43. $x^2 - 4$ **44.** $c^2 - 64$ **45.** $9x^2 - 1$

Factor each expression completely.

51. $9x^2 - 36$ **52.** $18z^2 - 8$ **53.** $12y^2 - 75$

54. $64t^2 - 16$ **55.** $12x^2 + 36x + 27$ **56.** $16x^2 - 80x + 100$

57. $2a^2 - 16a + 32$ **58.** $3x^2 - 24x - 27$ **59.** $18b^2 + 24b - 10$

60. $4n^2 - 20n + 24$ **61.** $3y^2 + 24y + 45$ **62.** $-x^2 + 5x - 4$

63. $4x^2 - 22x + 10$ **64.** $\frac{1}{2}x^2 - \frac{1}{2}$ **65.** $-6z^2 - 600$