

(Textbook Page 946 Problem 45)

1. Factor by grouping:

$$12p^3 - 16p^2 + 3p - 4$$

(Textbook Page 946 Problem 43)

2. Factor by grouping:

$$8x^3 - 12x^2 + 6x - 9$$

(Textbook Page 954 Problem 19)

3. Factor completely: $x^2 - 7x - 18$

(Textbook Page 954 Problem 31)

4. Factor completely: $x^2 + x - 42$

(Textbook Page 954 Problem 21)

5. Factor completely: $x^3 - 6x^2 - 16x$

(Textbook Page 954 Problem 23)

6. Factor completely: $y^3 - 4y^2 - 45y$

(Textbook Page 963 Problem 15)

7. Factor completely: $3x^2 - 5x - 2$

(Textbook Page 968 Problem 17)

8. Factor completely: $3x^2 - 4x - 15$

(Textbook Page 963 Problem 9)

9. Factor completely: $4x^2 + 4x - 15$

(Textbook Page 968 Problem 15)

10. Factor completely: $2x^2 + 7x - 4$

(Textbook Page 979 Problem 61)

11. Factor completely: $16a^2 - 9$

(Textbook Page 979 Problem 63)

12. Factor completely: $4x^2 - 25y^2$

(Textbook Page 996 Problem 11)

13. Solve: $(2x + 5)(x + 4) = 0$

(Textbook Page 996 Problem 13)

14. Solve: $(5x + 1)(4x - 12) = 0$

(Textbook Page 996 Problem 41)

15. Solve: $x^2 + 16 = 8x$

(Textbook Page 1008 Problem 1)

17. The length of one leg of a right triangle is 8 ft. The length of the hypotenuse is 2 ft longer than the other leg. Find the length of the hypotenuse and the other leg.

(Textbook Page 1026 Problem 29)

19. Simplify: $\frac{a^2 - 9}{a^2 + 5a + 6}$

(Textbook Page 1027 Problem 61)

21. Multiply and simplify:

$$\frac{a^2 - 9}{a^2} \cdot \frac{a^2 - 3a}{a^2 + a - 12}$$

(Textbook Page 1063 Problem 49)

23. Solve: $\frac{4}{y-2} - \frac{2y-3}{y^2-4} = \frac{5}{y+2}$

(Textbook Page 1073 Problem 1)

25. It takes Mandy 4 hr to put up paneling in a room. Omar takes 5 hr to do the same job. How long would it take them, working together, to panel the room?

(Textbook Page 967 Problem 43)

16. Solve: $6x^2 - 4x = 10$

(Workbook Page 438 Problem 17)

18. The length of one leg of a right triangle is 15 ft. The length of the hypotenuse is 5 ft longer than the other leg. Find the length of the hypotenuse and the other leg.

(Textbook Page 1026 Problem 33)

20. Simplify: $\frac{x^2 - 25}{x^2 - 10x + 25}$

(Textbook Page 1027 Problem 63)

22. Multiply and simplify:

$$\frac{4a^2}{3a^2 - 12a + 12} \cdot \frac{3a - 6}{2a}$$

(Textbook Page 1099 Problem 37)

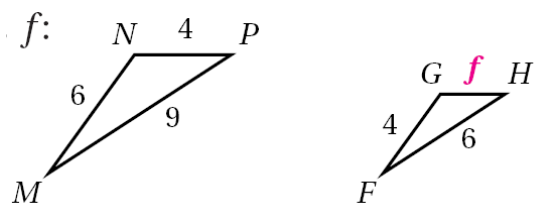
24. Solve: $\frac{1}{x+3} + \frac{1}{x-3} = \frac{1}{x^2-9}$

(Textbook Page 1073 Problem 3)

26. Vern can shovel the snow from his driveway in 45 min. Nina can do the same job in 60 min. How long would it take Nina and Vern to shovel the driveway if they worked together?

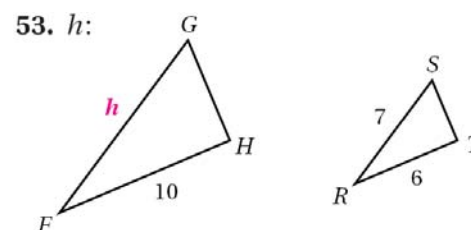
(Textbook Page 1078 Problem 51)

27. For the pair of similar triangles, find the length of the indicated side.



(Textbook Page 1078 Problem 53)

28. For the pair of similar triangles, find the length of the indicated side.



(Textbook Page 1168 Problem 71)

29. Multiply and simplify:

$$\sqrt{2x^2y}\sqrt{4xy^2}$$

(Textbook Page 1168 Problem 79)

30. Multiply and simplify:

$$\sqrt{18x^2y^3}\sqrt{6xy^4}$$

(Textbook Page 1174 Problem 11)

31. Divide and simplify: $\frac{\sqrt{8x}}{\sqrt{2x}}$

(Textbook Page 1174 Problem 13)

32. Divide and simplify: $\frac{\sqrt{63y^3}}{\sqrt{7y}}$

(Textbook Page 1182 Problem 19)

33. Add or subtract: $\sqrt{18} - 3\sqrt{8} + \sqrt{50}$

(Textbook Page 1182 Problem 21)

34. Add or subtract: $2\sqrt{27} - 3\sqrt{48} + 3\sqrt{12}$

(Textbook Page 1184 Problem 49)

35. Multiply: $(3\sqrt{5} - 2)(\sqrt{5} + 1)$

(Textbook Page 1183 Problem 43)

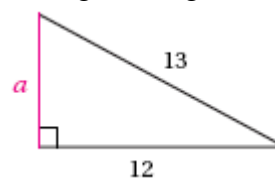
36. Multiply: $(2 - \sqrt{5})^2$

(Textbook Page 1201 Problem 27)

37. How long is a guy wire reaching from the top of a 12-ft pole to a point on the ground 8 ft from the base of the pole?

(Textbook Page 1199 Problem 6)

38. Find the length of the third side of the right triangle.



(Textbook Page 1215 Problem 9)

39. Solve: $3x^2 + 6x = 0$

(Textbook Page 1215 Problem 17)

40. Solve: $11x = 5x^2$

(Textbook Page 1223 Problem 3)

41. Solve: $5x^2 = 35$

(Textbook Page 1223 Problem 14)

42. Solve: $8x^2 - 400 = 0$

(Textbook Page 1224 Problem 41)

43. Solve by completing the square:

$$x^2 - 7x - 2 = 0$$

(Textbook Page 1224 Problem 38)

44. Solve by completing the square:

$$x^2 - 18x + 74 = 0$$

(Textbook Page 1231 Problem 13)

45. Solve: $y^2 - 10y + 22 = 0$

(Textbook Page 1231 Problem 43)

46. Solve: $2x^2 - 5x = 1$

(Textbook Page 1252 Problem 8)

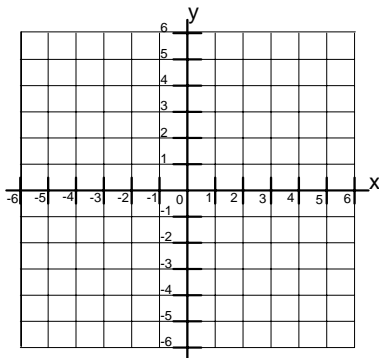
47. Find the vertex: $y = x^2 + 2x + 1$

(Textbook Page 1252 Problem 14)

48. Find the vertex: $y = 2x^2 + 4x - 1$

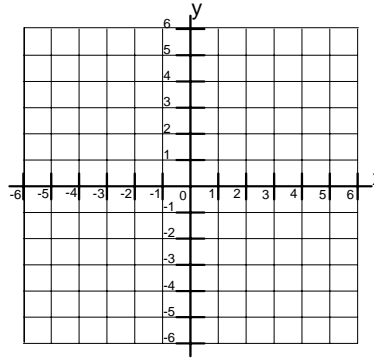
(Textbook Page 1253 Problem 23)

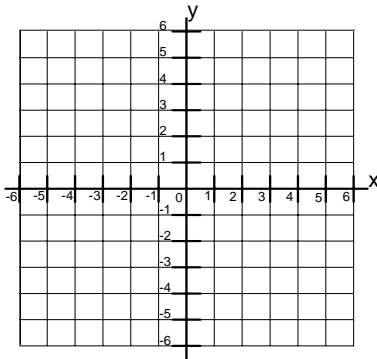
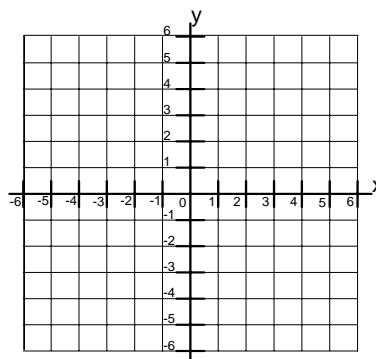
49. Graph: $y = x^2 - x - 6$



(Textbook Page 1253 Problem 11)

50. Graph: $y = -x^2 + 2x + 3$



*(Textbook Page 1253 Problem 13)*51. Graph: $y = -2x^2 - 4x + 1$ *(Textbook Page 1253 Problem 23)*52. Graph: $y = x^2 - x - 6$ *(Textbook Page 1254 Problem 27)*

53. Find the x – intercepts:

$$y = x^2 + 5x$$

(Textbook Page 1254 Problem 31)

54. Find the x – intercepts:

$$y = x^2 - 6x + 9$$

*(Textbook Page 1215 Problem 45)*55. Solve: $t(9 + t) = 4(2t + 5)$ *(Textbook Page 1215 Problem 47)*56. Solve: $16(p - 1) = p(p + 8)$ *(Textbook Page 710 Problem 59)*57. Solve: $3(2y - 3) = 27$ *(Textbook Page 710 Problem 61)*58. Solve: $40 = 5(3x + 2)$ *(Textbook Page 710 Problem 81)*59. Solve: $3(r - 6) + 2 = 4(r + 2) - 21$ *(Textbook Page 710 Problem 83)*60. Solve: $19 - (2x + 3) = 2(x + 3) + x$