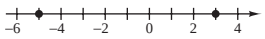
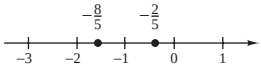
Review Exercises for Chapter P

1. $-5 < 3$



3. $-\frac{8}{5} < -\frac{2}{5}$



5. $d = |9 - (-2)|$
$= |11|$
$= 11$

7. $d = |-13.5 - (-6.2)|$
$= |-13.5 + 6.2|$
$= |-7.3|$
$= 7.3$

9. $|-5| = 5$

11. $-|-7.2| = -7.2$

13. $15 + (-4) = 11$

15. $340 - 115 + 5 = 230$

17. $-63.5 + 21.7 = -41.8$

19. $\frac{4}{21} + \frac{7}{21} = \frac{11}{21}$

21. $-\frac{5}{6} + 1 = -\frac{5}{6} + \frac{6}{6} = \frac{1}{6}$

23. $8\frac{3}{4} - 6\frac{5}{8} = \frac{35}{4} - \frac{53}{8} = \frac{70}{8} - \frac{53}{8} = \frac{17}{8}$

25. $-7 \cdot 4 = -28$

27. $120(-5)(7) = -4200$

29. $\frac{3}{8} \cdot \frac{-2}{15} = \frac{-6}{120} = \frac{-1}{20}$

31. $\frac{-56}{-4} = 14$

33. $-\frac{7}{15} \div -\frac{7}{30} = -\frac{7}{15} \cdot \frac{30}{-7} = 2$

35. $(-6)^3 = (-6)(-6)(-6) = -216$

37. $-4^2 = -1 \cdot 4 \cdot 4 = -16$

39. $-\left(-\frac{1}{2}\right) = -1 \cdot \left(-\frac{1}{2}\right)\left(-\frac{1}{2}\right)\left(-\frac{1}{2}\right) = \frac{1}{8}$

41. $120 - (5^2 \cdot 4) = 120 - (25 \cdot 4)$
$= 120 - 100$
$= 20$

43. $8 + 3[6^2 - 2(7 - 4)] = 8 + 3[36 - 2(3)]$
$= 8 + 3[36 - 6]$
$= 8 + 3[30]$
$= 8 + 90$
$= 98$

45. Additive Inverse Property justifies $13 - 13 = 0$.

47. Distributive Property justifies $7(9 + 3) = 7 \cdot 9 + 7 \cdot 3$.

49. Associative Property of Addition justifies $5 + (4 - y) = (5 + 4) - y$.

51. $(u - v)(2) = 2(u - v)$ illustrates the Commutative Property of Multiplication.

53. $8(x - y) = 8 \cdot x - 8 \cdot y$ illustrates the Distributive Property.

55. $-(-u + 3v) = u - 3v$

57. $-y(3y - 10) = -3y^2 + 10y$

59. $x^2 \cdot x^3 \cdot x = x^{2+3+1} = x^6$

61. $(xy)(-3x^2y^3) = -3 \cdot x^{1+2} \cdot y^{1+3}$
$= -3x^3y^4$

63. $(5ab)(25a^3) = 125a^4b$

65. $7x - 2x = (7 - 2)x$
$= 5x$

67. $3u - 2v + 7v - 3u = (3u - 3u) + (-2v + 7v)$
$= 5v$

69. $5(x - 4) + 10 = 5x - 20 + 10$
$= 5x - 10$

71. $3x - (y - 2x) = 3x - y + 2x$
$= 5x - y$

73. $3[b + 5(b - a)] = 3[b + 5b - 5a]$
$= 3b + 15b - 15a$
$= 18b - 15a$

75. (a) $x = 3$
Substitute: $3^2 - 2(3) - 3$
Value of expression: 0
(b) $x = 0$
Substitute: $(0)^2 - 2(0) - 3$
Value of expression: -3

77. $200 - 3n$

79. $n^2 + 49$

81. The sum of twice a number and seven

83. The difference of a number and five, all divided by four

85. $0.18I$ = tax on I dollars at 18%

87. $l \cdot (l - 5)$ = area of rectangle with length l and width $(l - 5)$

89. Combined expenditures $= 12.1 + 10.8 + 38.6 + 9.2 + 40.3 = \$111.0$

91. Difference between the airports with the greatest and smallest passenger volumes
$= 30.8 - 15.2$
$= 15.6$ million

93. Airports from greatest to smallest volume:

1.	Atlanta/Hartsfield	30.8
2.	Chicago/O'Hare	30.5
3.	Dallas/Ft. Worth	26.6
4.	Los Angeles	22.7
5.	Denver	15.2
6.	San Francisco	15.2