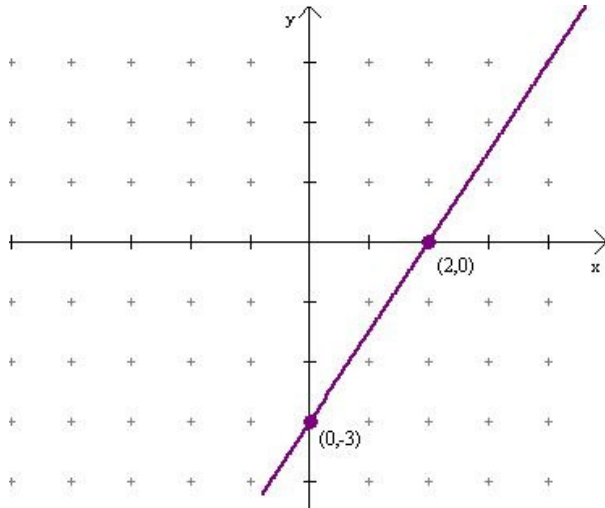
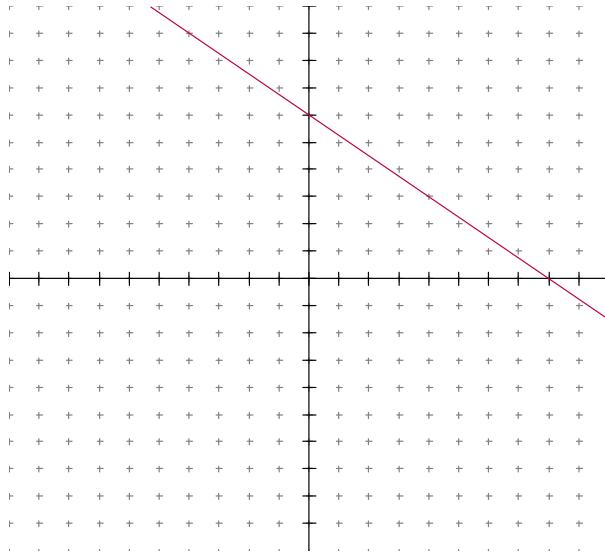


**South Plains College
Intermediate Algebra (MATH 0320)
Review Objectives Answers**

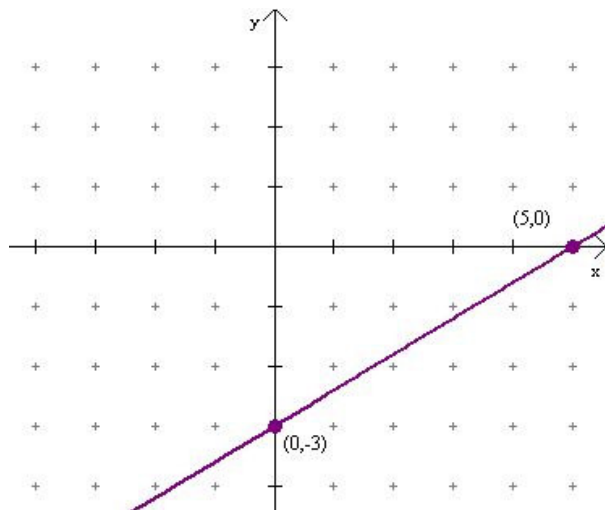
1.



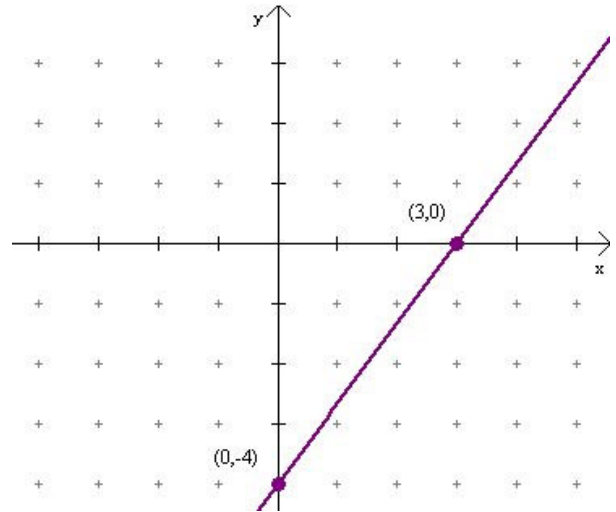
2.



3.



4.



5.

$$y = 3x + 1$$

6.

$$y = -2x + 1$$

7.

$$y = x - 2$$

8.

$$y = \frac{2}{5}x - 1$$

9.

$$y = \frac{3}{4}x - 2$$

10.

$$y = \frac{4}{5}x - 1$$

11.

$$x = 2$$

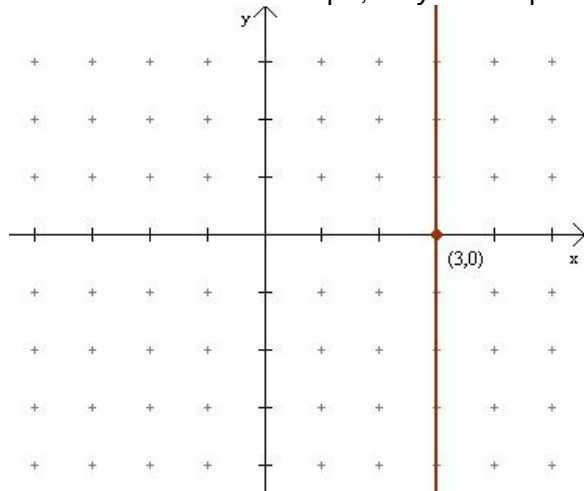
12.

$$y = 5$$

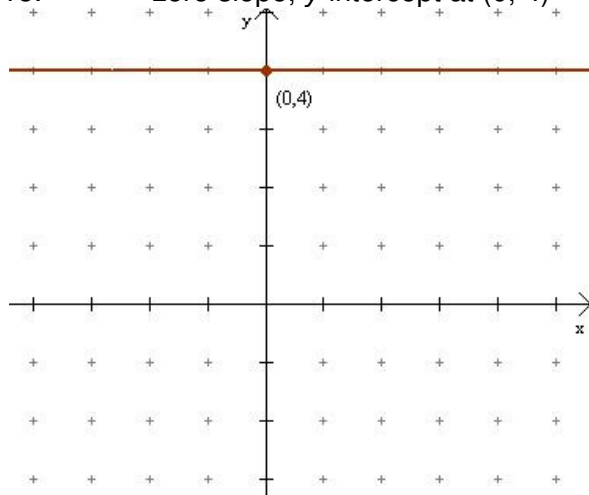
13.

Slope Intercept $y = \frac{-1}{5}x + \frac{19}{5}$

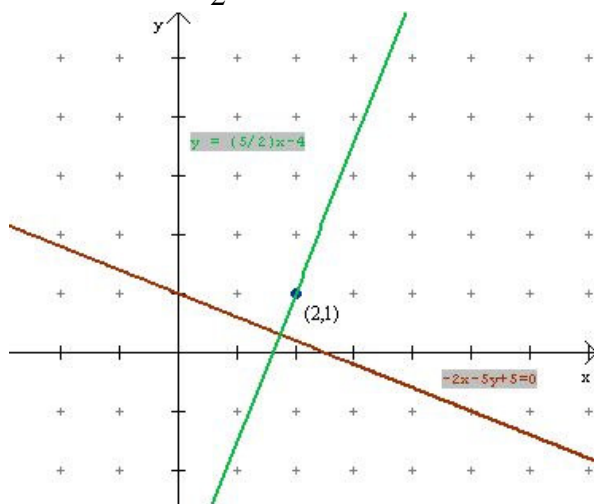
14. undefined slope, no y-intercept



15. zero slope, y-intercept at $(0, 4)$

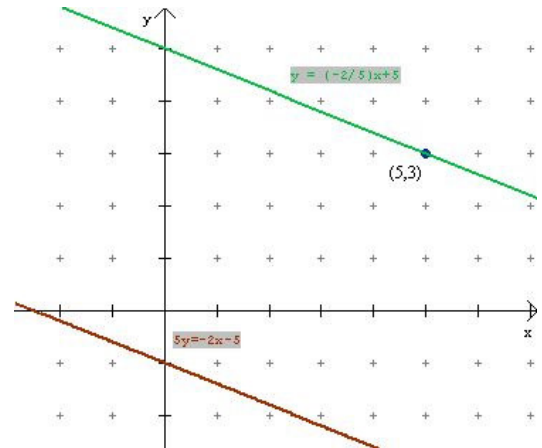


16. $y = \frac{5}{2}x - 4$



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

18.



inconsistent system, no solution

19.

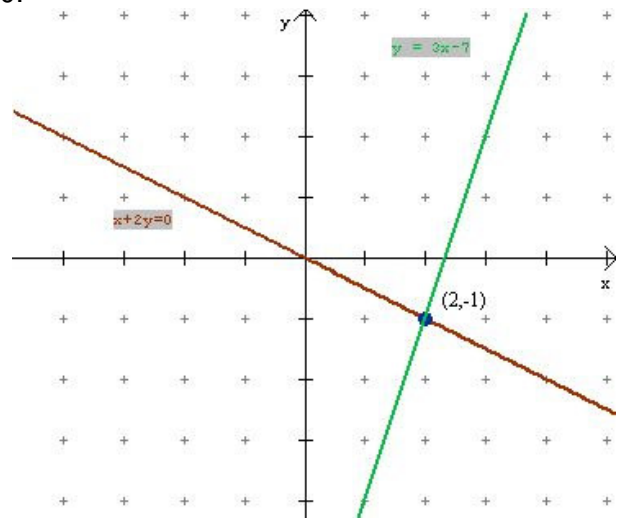
dependent system

$$\{(x, 3 - 2x)\}$$

or

$$\{(\frac{3-y}{2}, y)\}$$

20.



consistent system; $\{(2, -1)\}$, point

21.

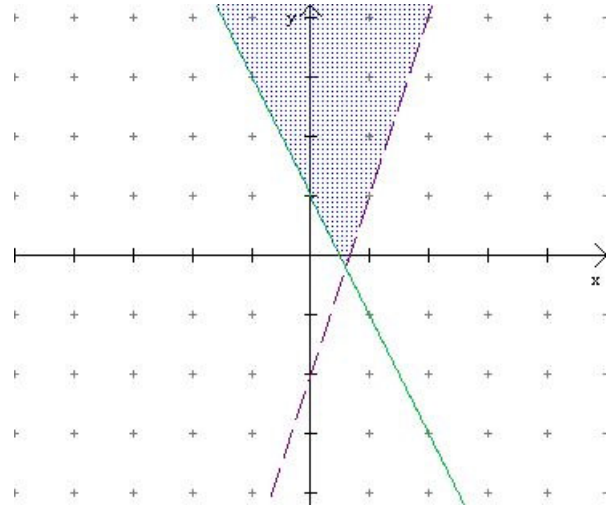
inconsistent system, no solution

22. consistent system $\{(\frac{1}{2}, \frac{-1}{4})\}$, point
23. consistent system $\{(3, -4)\}$, point
24. consistent system $\{(\frac{1}{3}, \frac{-5}{2})\}$, point
25. infinitely many solutions $\left\{\left(x, \frac{2}{3}x + 1\right)\right\}$ or $\left\{\left(\frac{3}{2}y - \frac{3}{2}, y\right)\right\}$
dependent system
26. $\{(5, -4)\}$ consistent system
27. No solution.
Inconsistent system.
- 28.
- $$x + y = 19$$
- $$x - y = 3$$
- $$x = 11, y = 8$$
- 29.
- $$x + y = 51$$
- $$y - 2x = 9$$
- $$x = 14; y = 37$$
30. There are 353 calories in a steak and cheese sandwich and 212 calories in a chocolate chip cookie.
31. 12 feet by 28 feet
32. 140 mph airspeed of plane
50 mph wind speed
33. 40 pounds
34. \$15,000 in bonds
\$18,750 in stocks
35. 39.4 pounds of walnuts and 10.6 pounds of pecans
36. The airspeed is 170 miles per hour and the impact of the wind

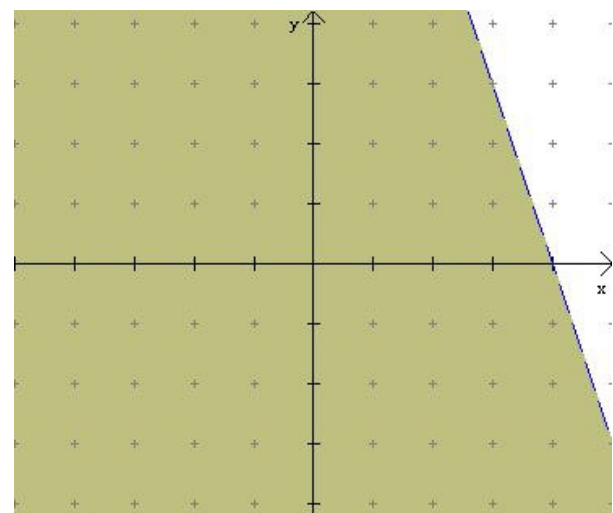
resistance on the airplane is 10 miles per hour.

37. Car A 400 miles in 8 hours
Car B 320 miles in 8 hours

38.



39.



40. $7(x+3)(x-5)$
41. $(4x - 5)(4x + 5)$

42. $(2x+3)(4x^2-6x+9)$

43. $2(y+7)(y-7)$

44. $(2z+7)(3z-4)$

45. $(x-5)(x^2+2)$

46. $(a+2-3b)(a+2+3b)$

47. $2x(1+2x)(1-2x)$

48. $\{-2, 7\}$

49. $\{0, \frac{7}{2}\}$

50. $\{-4, 0\}$

51. $\{-5, 8\}$

52. $\{-2, \frac{-5}{4}\}$

53. $\{-5, \frac{-2}{3}, 11\}$

54. $\frac{3}{x^2}$

55. $\frac{y+2}{y-5}$

56. $\frac{x-6}{2x(x+7)}$

57. $\frac{x+4y}{x-3y}$

58. $\frac{1}{6x(x+1)}$

59. 1

60. $\frac{3x}{x-4}$

61. $\frac{x}{4y^2(x-2y)}$

62. $\frac{x^2-5x+9}{2(2x-3)(x+1)}$

63. $\frac{3x+4}{x-6}$

64. 1

65. $\frac{3x-2}{x-4}$

66. $\frac{-13x+6}{(x-6)^2(x+6)}$

67. $\frac{x^2+3x+5}{(x+2)^2(x-1)}$

68. $\frac{x^2-2x+5}{(x-3)(x+2)}$

69. $\frac{5(3y-1)}{(y+1)(y-3)}$

70. $\{-3\}$

71. no solution
 $a \neq -1$ or 1

72. $x \neq -6$ or 7
 $\{\frac{37}{9}\}$

73. $\{-\frac{1}{2}, \frac{2}{3}\}$
 $p \neq 0$

74. $\{-11, 14\}$
 $x \neq 7$ or -7

75. $\{7\}$
 $x \neq -3$ or 6

76. $\{-16\}$
 $x \neq -8$ or 1
77. 4
78. -5
79. 27
80. 25
81. $(6y)^{\frac{1}{3}}$
82. $x^{\frac{3}{7}}$
83. $3\sqrt{2}$
84. $2\sqrt[3]{5}$
85. $2ab^3 \sqrt{2a}$
86. 30
87. $2xy\sqrt[5]{3x}$
88. $\frac{\sqrt{6}}{5}$
89. $\frac{7\sqrt{3}}{3}$
90. 3
91. $4y^3\sqrt{3}$
92. $10\sqrt{5x}$
93. $7\sqrt{2}$
94. $3\sqrt{5x} - 5x\sqrt{7}$
95. $-85 + 3\sqrt{6}$
96. $64 - 13\sqrt{14}$
97. $15x^3\sqrt{2x}$
98. $30\sqrt{7}$

99. $2(\sqrt{3} + 1)$
100. $\frac{\sqrt{7} + \sqrt{3}}{4}$
101. $\{14\}$
102. $\{7\}$
103. $\{3\}$
104. $\{7\}$
105. $\{4\}$
106. $8 + 6i$
107. $6 - \sqrt{5}i$
108. $-4 - 15i$
109. $72 + 32i$
110. $61i$
111. $-20 + 48i$
112. -12
113. $18 - 66i$
114. i
115. $-\frac{5}{8} - \frac{5}{8}i$
116. $\{-4, 4\}$
117. $\left\{\frac{-7}{2}, \frac{1}{2}\right\}$
118. $\{-5 - \sqrt{6}, -5 + \sqrt{6}\}$
119. $\left\{\frac{3}{2} - \frac{\sqrt{11}}{2}i, \frac{3}{2} + \frac{\sqrt{11}}{2}i\right\}$

$$120. \left\{ -1 - \frac{\sqrt{6}}{2}i, -1 + \frac{\sqrt{6}}{2}i \right\}$$

$$121. \left\{ \frac{-1 - \sqrt{22}}{3}, \frac{-1 + \sqrt{22}}{3} \right\}$$

$$122. \left\{ 1 - \frac{\sqrt{3}}{2}, 1 + \frac{\sqrt{3}}{2} \right\}$$

$$123. \left\{ \frac{1}{3} \right\}$$

$$124. \left\{ \frac{-8}{3}, 1 \right\}$$

$$125. \left\{ \frac{5}{2} \right\}$$