

ANSWERS FOR 3.2

For use with pages 152–155

3.2 Guided Practice

2. *Sample answer:* Because the revised equation is already solved for the other variable, it is the most direct way to find the value.
4. $(-2, 0)$ 6. $(2, -1)$
8. $\left(1, -\frac{7}{2}\right)$
10. 120 single-scoop and 130 double-scoop cones
12. no solution
14. $\left(\frac{22}{5}, -6\right)$
16. $\left(\frac{3}{2}, \frac{1}{2}\right)$
18. $(-1, -1)$
20. $\left(\frac{57}{7}, -\frac{9}{7}\right)$
22. infinitely many solutions
24. $(-2, 6)$ 26. $(-1, -1)$
28. $\left(-5, \frac{3}{2}\right)$
30. $\left(2, \frac{1}{2}\right)$
32. infinitely many solutions
34. $(4, 5)$
36. infinitely many solutions
38. $(-6, -7)$ 40. $\left(5, \frac{7}{4}\right)$
42. $\left(\frac{19}{8}, \frac{15}{8}\right)$
44. $(-5, -5)$ 46. $(2, -2)$
48. infinitely many solutions
50. a. *Sample answer:* The second equation is equal to -2 times the first, so there are infinitely many solutions.
- b. *Sample answer:* The left-hand side of the second equation is equal to 3 times the left-hand side of the first equation, but $12 \neq 3 \cdot 8$, so there are no solutions.
52. $(3, 3)$ 54. 24; \$120
56. $H = 1.008$ u; $C = 12.011$ u

ANSWERS FOR 3.2 (CONT.)

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58. $3.25x + 3.25y = 975$
 $x = y + 60$

The smaller bedroom is 120 ft², the larger one is 180 ft².

60. $m = -0.12x + 51.667$
 $w = -0.178x + 58.617$

62. *Sample answer:* Athletic performance cannot be expected to improve at the same linear rate indefinitely. First of all, there is some limit to what the human body can accomplish, and eventually the graph of performance times would tend to become tangent to the horizontal line at this value. Further, a line would have an x -intercept, implying some future time at which the race would be won in 0 seconds, which is impossible.

64. B

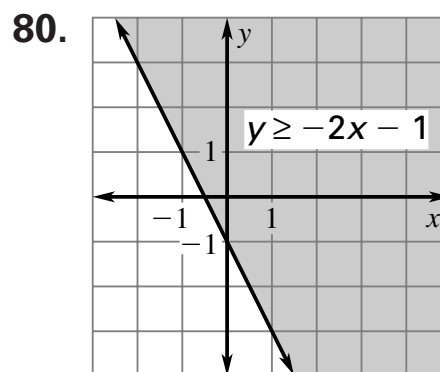
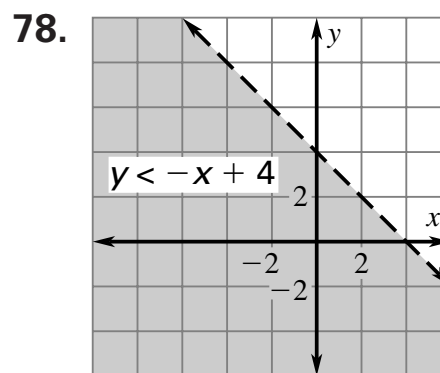
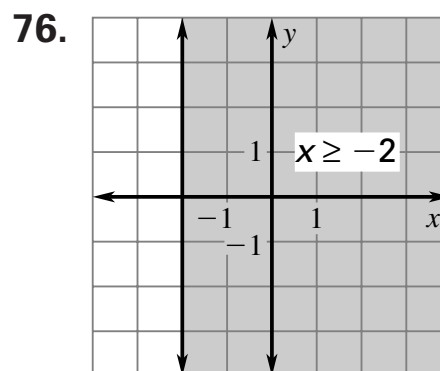
3.2 Mixed Review

66. 2; -2 68. 4; -3

70. $\frac{10}{3}$; -2

72. $y = -\frac{5}{3}x - \frac{1}{3}$

74. $y = -\frac{1}{5}x + \frac{8}{5}$



ANSWERS FOR 3.2 (CONT.)

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Quiz 1

2. $(1, -3)$ 4. $\left(\frac{7}{3}, -\frac{8}{3}\right)$

6. $(-1, -1)$ 8. 1

10. 1

12. infinitely many solutions

14. $(6, 6)$ 16. $\left(-4, \frac{7}{2}\right)$

18. $\left(-\frac{33}{29}, \frac{13}{29}\right)$