ANSWERS FOR 3.5

For use with pages 173–175

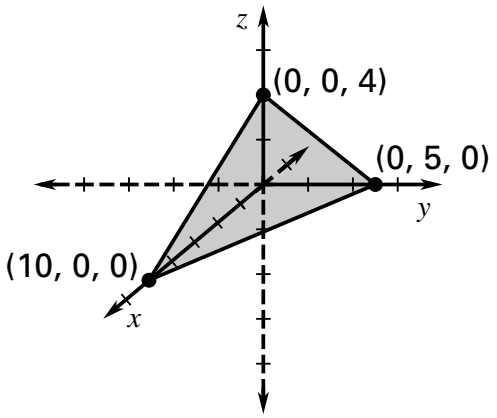
3.5 Guided Practice

2. false

4. To graph a linear equation in three variables, find the three intercepts and shade the triangular region lying in one octant.

6. $A = (2, 0, 4)$; $B = (2, 3, 0)$; $C = (0, 3, 4)$; $D = (0, 0, 4)$

8.



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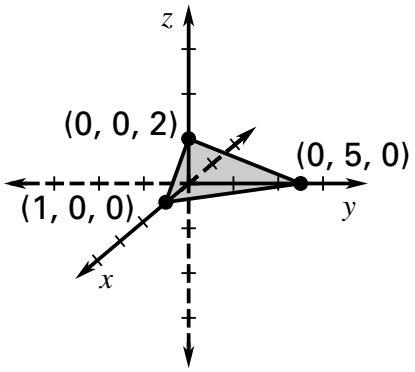

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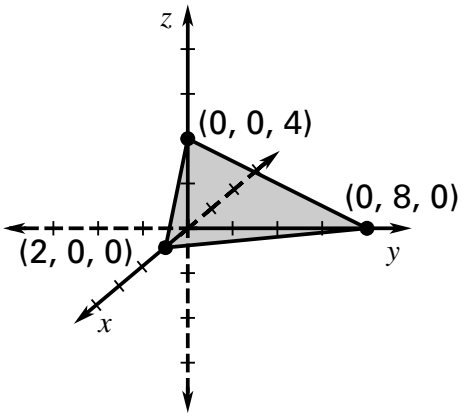
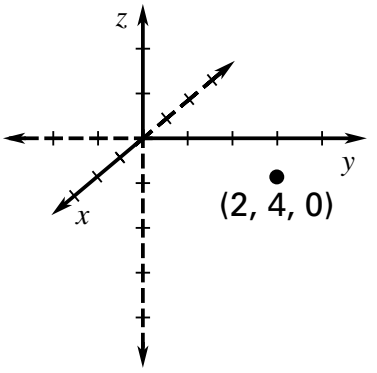


14. $f(x, y) = 7 + 2x + y$; 3

16. $f(x, y) = -3 + x - 2y$; -5

18.



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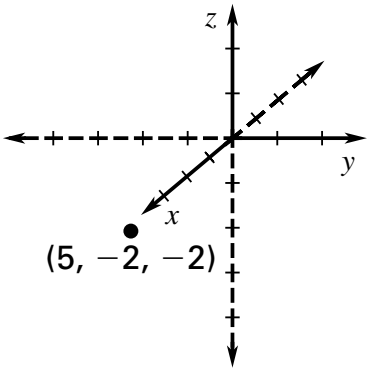

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ANSWERS FOR 3.5 (CONT.)

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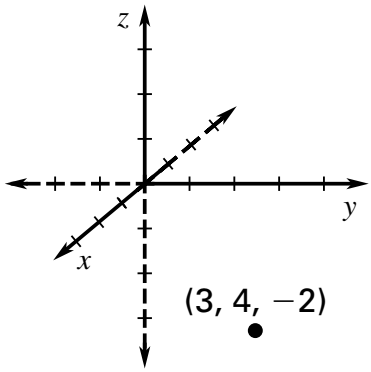
22.



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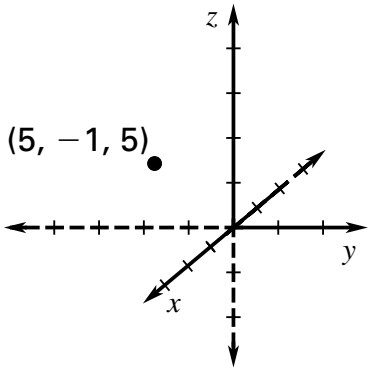

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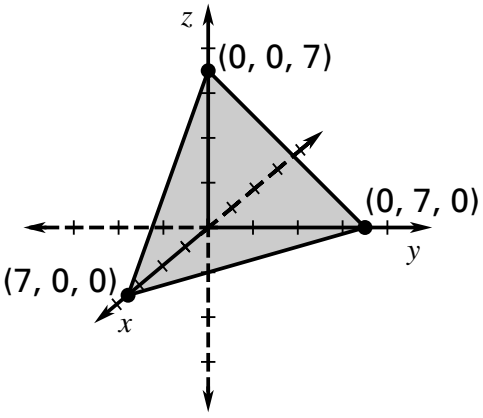

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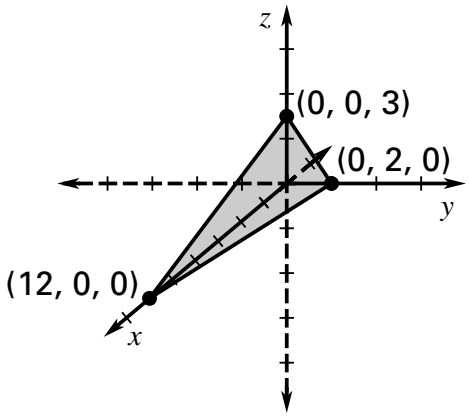

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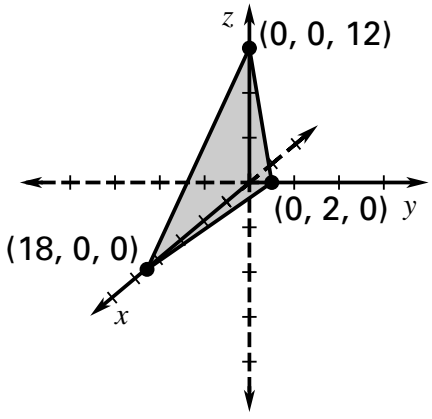

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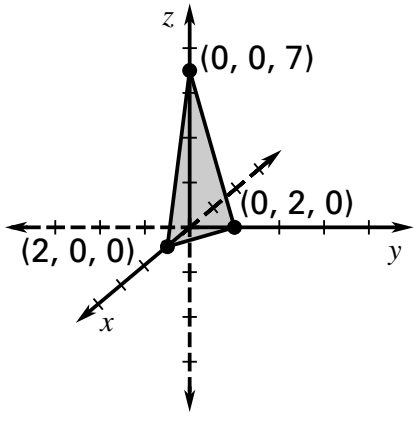

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ANSWERS FOR 3.5 (CONT.)

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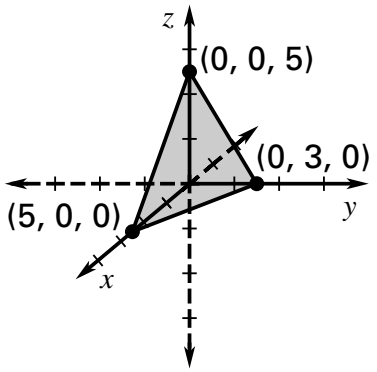
34.



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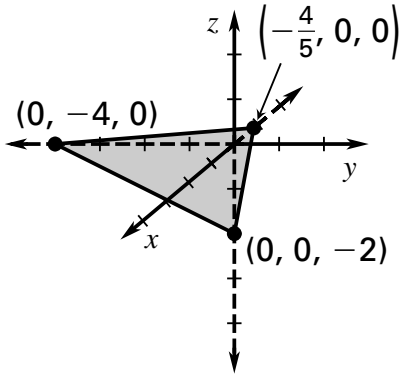

38. $f(x, y) = 6 - 2x - \frac{2}{3}y$; $\frac{4}{3}$

40. $f(x, y) = 10 - x - 6y$; 20

42. $f(x, y) = -2 - \frac{1}{7}x - \frac{2}{7}y$; $\frac{11}{7}$

44. $f(x, y) = x - 5y - 14$; -41

46. 56 cubic units

48. $C = 0.4g + 4a + 65$

a	*g*	*C*
1	10	\$73
2	20	\$81

50. $C = 0.7t + 0.3c + 12$

t	*c*	*C*
6	6	\$18
12	12	\$24

52. $S = 8l + 6b + 10$

l	*b*	*S*
3	6	\$70
6	3	\$76

54. $x - 2y + z = 4$

56. $27x - 18y - 12z = 108$

54 and 56. *Sample explanation:* I found the least common multiple of the intercepts and divided each one into the LCM to find the coefficients of the variables.

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ANSWERS FOR 3.5 (CONT.)

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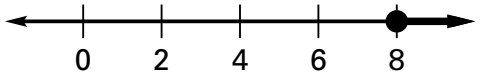
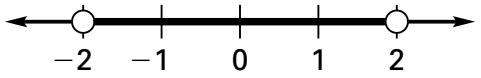
3.5 Mixed Review

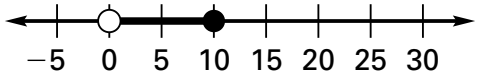
58. $x \geq 8$



60. $-2 < x < 2$



62. $-3 < 2x - 3 \leq 17$



64. perpendicular

66. perpendicular

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