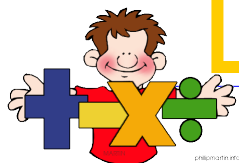


Math Connections



Math Course 3—Week 4 Answers

Equations With Fractional Coefficients 5.1.2 Answers

Answers

- | | | | |
|------------------------|------------------------|-------------------------|-------------------------|
| 1. $x = 80$ | 2. $x = 105$ | 3. $y = 66\frac{2}{3}$ | 4. $m = -\frac{9}{4}$ |
| 5. $y = 3$ | 6. $x = 22.5$ | 7. $y = -17\frac{1}{2}$ | 8. $m = -3$ |
| 9. $x = -\frac{10}{9}$ | 10. $x = \frac{36}{7}$ | 11. $x = \frac{48}{7}$ | 12. $x = \frac{65}{11}$ |

Systems Of Linear Equations 5.2.1 - 5.2.4 Answers

Answers

- | | | |
|-------------|------------|------------|
| 1. (9, 3) | 2. (4, 7) | 3. (4, 24) |
| 4. (19, 52) | 5. (4, 11) | 6. (3, -2) |
7. Let x = number of windows, y = cost. Jacques: $y = 15 + 1x$; Roy: $y = 5 + 2x$. The solution is (10, 25), which means that the cost to wash 10 windows is \$25. For fewer than 10 windows use Roy; for more than 10 windows, use Jacques.
8. Let x = weeks, y = total charges. Thigh Hopes: $y = 95 + 15x$; ABSolutely fABulus: $y = 125 + 12x$. The solution is (10, 245). At 10 months the cost at either club is \$245. For 12 months use ABSolutely fABulus.
9. Let x = weeks, y = total savings. Misha: $y = 15x + 80$; Nora: $y = 25x$. The solution is (8, 200). Both of them will have \$200 in 8 weeks, so Nora will have \$225 in 9 weeks and be able to purchase the lift pass first. An alternative solution is to write both equations, then substitute 225 for y in each equation and solve for x . In this case, Nora can buy a ticket in 9 weeks, Misha in 9.67 weeks.
10. Let x = weeks and y = weight of the pumpkin. Ginny: $y = 2.5x + 22$; Martha: $y = 4x + 10$. The solution is (8, 42), so their pumpkins will weigh 42 pounds in 8 weeks. Ginny would win (39.5 pounds to 38 pounds for Martha).
11. Let x = weeks, y = total money saved. Larry: $y = 35x + 215$; Betty: $y = 20x + 380$. The solution is (11, 600). They will both have \$600 in 11 weeks.

Rigid Transformations 6.1.1 - 6.1.4 Answers

Answers (1 to 4 may vary; 5 to 20 given in the order A', B', C')

- | | |
|-------------------------------|------------------------------|
| 1. translation | 2. rotation and translation |
| 3. reflection | 4. rotation and translation |
| 5. (-1, -3) (1, 2) (3, -1) | 6. (-2, -3) (2, -3) (3, 0) |
| 7. (-5, 4) (3, 4) (-3, -1) | 8. (1, 0) (3, -4) (5, -2) |
| 9. (-5, -2) (-1, -2) (0, -5) | 10. (-4, -2) (4, -2) (-2, 3) |
| 11. (-1, 0) (-3, 4) (-5, 2) | 12. (5, 2) (1, 2) (0, 5) |
| 13. (4, 2) (-4, 2) (2, -3) | 14. (0, 1) (-4, 3) (-2, 5) |
| 15. (-2, -5) (-5, 0) (-2, -1) | 16. (-2, -4) (-2, 4) (3, -2) |
| 17. (-1, 0) (-3, -4) (-5, -2) | 18. (4, -2) (-4, -2) (2, 3) |
| 19. (2, 5) (2, 1) (5, 0) | 20. (2, 4) (2, -4) (-3, 2) |

Similar Figures 6.2.1 - 6.2.4 Answers

Answers

1. similar; 2
2. similar; $\frac{8}{5} = 1.6$
3. not similar
4. $\frac{5}{2}$; $x = 7.5$
5. $\frac{3}{2}$; $y = 9$
6. $\frac{4}{3}$; $x = \frac{20}{3} = 6\frac{2}{3}$, $y = \frac{16}{3} = 5\frac{1}{3}$, $t = 8$, $z = \frac{25}{3} = 8\frac{1}{3}$
7. $\frac{5}{2}$; $a = \frac{16}{5} = 3.2$, $b = \frac{24}{5} = 4.8$, $c = 6$

Scaling To Solve Percent and Other Problems 6.2.4 - 6.2.6 Answers

Answers

- | | | | | | | | |
|----|---------|-----|-----------|-----|----------------------|-----|-----------------|
| 1. | 16 cm | 2. | 27 inches | 3. | $18\frac{3}{4}$ feet | 4. | \$13.00 |
| 5. | 80 | 6. | 105 | 7. | $66\frac{2}{3}$ | 8. | $-2\frac{1}{4}$ |
| 9. | \$47.40 | 10. | \$31.86 | 11. | \$31.60 | 12. | \$157,500 |