Secondary Math Summer Practice

Math Connections

Math Course 3—Week 1 Answers

Diamond Problems 1.1.1 Answers

Answers

1. –32 and –4	2. –4 and –6	3. –6 and 6	4. 6 and –1
5. 4.56 and 5	6. 5 and 40.5	7. 3.4 and 11.56	8. 3 and 6.2
9. $-\frac{1}{14}$ and $-\frac{5}{14}$	10. $\frac{13}{10}$ and $\frac{13}{50}$	11. $\frac{1}{2}$ and $\frac{7}{5}$	12. $\frac{1}{3}$ and $\frac{1}{3}$
13. xy and $x + y$	14. a and $2a$	15. $-6b$ and $-48b^2$	16. $4a$ and $12a^2$

Describing And Extending Patterns 1.1.2 Answers

Answers

1. 50 dots

Figure 4

2. 31 dots

Figure 5

3. 110 dots

Figure 4

4. 22 dots

Figure 4

5. 40 dots

Figure 5

6. 140 dots

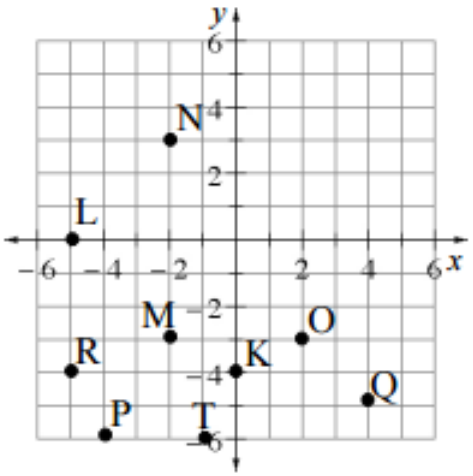
Figure 4

Four - Quadrant Graphing 1.1.2 and 1.1.3 Answers

Answers

1. $S(2, 2)$
   $T(-1, -6)$
   $U(0, 6)$
   $V(1, -4)$
   $W(-6, 0)$
   $Z(-5, 3)$

2.



Writing Equations Word Problems (The 5 - D Process 1.1.3 Answers

Answers (Equations may vary.)

1. $x + (x + 26) = 100$
   The lengths of the boards are 37 cm and 63 cm.

2. $x + (x + 5) = 51$
   Thu is 28 years old and her brother is 23 years old.

3. $3x - 13 = 305$
   Tomás is thinking of the number 106.

4. $x + (x + 1) = 123$
   The two consecutive numbers are 61 and 62.

5. $x + (x + 2) = 246$
   The two consecutive even numbers are 122 and 124.

6. $x + (x + 6) + 3(x + 6) = 149$
   Christine is 25, Aaron is 31, and Joe is 93 years old.

7. $2x + 4(38 - x) = 116$
   Farmer Fran has 20 goats and 18 chickens.

8. $x + (x + 15) + (x + 15) = 156$
   The lengths of the boards are 42, 57, and 57 cm.

9. $0.05x + 0.10(15 - x) = 0.90$
   Juan has 12 nickels and 3 dimes.

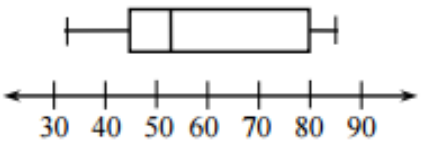
10. $\$5x + \$3.50(x + 100) = 2517.50$
    There were 255 adult and 355 student tickets purchased for the play.

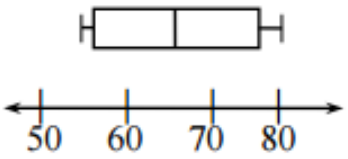
11. $3x + 2(x + 15) = 250$
    The lengths of the boards are 44 and 59 cm.

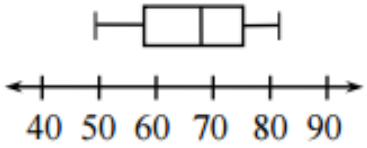
12. $0.05x + 0.25x + 0.10(3x) = 9.60$
    Conrad has 16 quarters, 16 nickels, and 48 dimes.

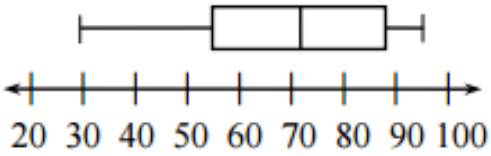
Graphical Representations Of Data 1.1.4 Answers

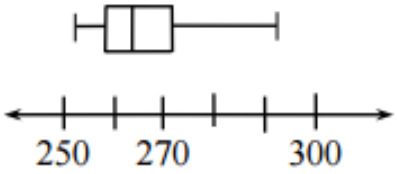
Answers

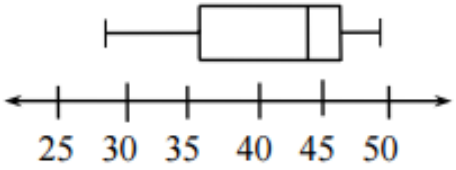
1. 

2. 

3. 

4. 

5. 

6. 

Proportional Relationships 1.2.1 and 1.2.2 Answers

Answers

1. $43 \frac{\text{words}}{\text{minute}}$
2. $3 \frac{\text{pages}}{\text{minute}}$
3. $2.89 \frac{\$}{\text{box}}$
4. $2.45 \frac{\text{points}}{\text{minute}}$
5. $0.84 \frac{\$}{\text{pound}}$
6. $3.38 \frac{\$}{\text{pound}}$
7. $2 \frac{\text{acre}}{\text{hour}}$
8. $2.29 \frac{\$}{\text{pound}}$
9. $\frac{2}{5} \frac{\text{grams}}{\text{centimeter}}$
10. $\approx 27 \frac{\text{miles}}{\text{hour}}$
11. \$10.69
12. 24.5 min.
13. 19.2 hours
14. \$153
15. 22.5 hours
16. $\frac{8}{9}$ cup
17. \$175
18. $4\frac{2}{3}$ inches
19. ≈ 5.36 miles
20. $9\frac{1}{3}$ cans
21. $3\frac{3}{8}$ hours
22. $g = \frac{5}{2}t$
23. $s = \frac{3}{4}x$
24. $t = 0.09c$
25. $C = 3.5b$

Algebra Tiles And Perimeter 2.1.1 and 2.1.2Answers

Answers

1. $4x + 4$ un.
2. $4x + 4$ un.
3. $2x + 8$ un.
4. $4x + 6$ un.
5. $4x + 4$ un.
6. $4x + 2$ un.
7. $4x + 4$ un.
8. $2x + 4$ un.

Combining Like Terms 2.1.2 and 2.1.3 Answers

Answers

1. $6x^2 + 8x + 13$
2. $4x^2 + 5x + 11$
3. $12x^2 + 5x + 7$
4. $x^2 + 4x + 1$
5. $6x^2 - 9x - 2$
6. $2x^2 - 10x + 9$
7. $-5x^2 + 11x + 4$
8. $7x + 2$
9. $-c^2 + 4c + x - 3$
10. $3a^3 - 2a^2 + 2a + 14$