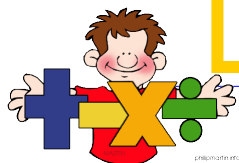


# Math Connections



## Math Course 3—Week 2 Answers

### Simplifying Expressions 2.1.3—2.1.5 Answers

#### Answers

- |     |           |     |           |     |               |
|-----|-----------|-----|-----------|-----|---------------|
| 1.  | 0         | 2.  | $2x + 2$  | 3.  | $2y + 2$      |
| 4.  | $-5x + 2$ | 5.  | $2y - 1$  | 6.  | $-y + 5$      |
| 7.  | $-2x - 1$ | 8.  | $-5x - 7$ | 9.  | $x - 3$       |
| 10. | $3x - 2$  | 11. | $8x - 2$  | 12. | $2x - 7$      |
| 13. | $-4y + 1$ | 14. | $2x + 4$  | 15. | $-y - 2$      |
| 16. | $3x + y$  | 17. | 0         | 18. | $-4x - y - 3$ |

### Comparing Quantities 2.1.5—2.1.8 Answers

#### Answers (Answers to problems 7 through 12 may vary.)

- |     |               |     |                      |     |                      |
|-----|---------------|-----|----------------------|-----|----------------------|
| 1.  | left          | 2.  | right                | 3.  | not possible to tell |
| 4.  | right         | 5.  | not possible to tell | 6.  | left                 |
| 7.  | A: $x$ ; B: 3 | 8.  | A: $3x$ ; B: 1       | 9.  | A: 1; B: $x$         |
| 10. | A: $x$ ; B: 3 | 11. | A: $2x$ ; B: $-2$    | 12. | A: $3x$ ; B: $-6$    |

### Solving Equations 2.1.8 and 2.1.9 Answers

#### Answers

- |     |             |     |                    |     |             |     |                    |     |          |
|-----|-------------|-----|--------------------|-----|-------------|-----|--------------------|-----|----------|
| 1.  | $x = 2$     | 2.  | $x = 5$            | 3.  | $x = 2$     | 4.  | $x = 1$            | 5.  | $x = 1$  |
| 6.  | $x = -6$    | 7.  | $x = -7$           | 8.  | no solution | 9.  | $x = 6$            | 10. | $x = -7$ |
| 11. | $x = 2$     | 12. | all numbers        | 13. | $x = 2$     | 14. | $x = 0$            | 15. | $x = 2$  |
| 16. | no solution | 17. | $x = 1\frac{1}{3}$ | 18. | $x = -7$    | 19. | $x = 2\frac{1}{5}$ | 20. | $x = -4$ |

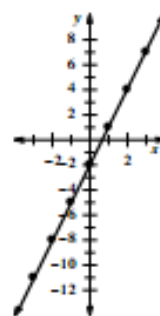
Tables, Graphs, and Rules 3.1.1—3.1.7 Answers

**Answers**

1. 24, -8, 7;  $y = x + 4$       2. 8, -5, 9;  $y = x - 3$       3. 40, -1, -26;  $y = 3x - 5$   
 4.  $\frac{1}{3}$ , 15, -45;  $y = -3x$       5. 8, -12, 8;  $y = -\frac{1}{2}x + 2$       6. 3, 5, -2;  $y = x + 3$   
 7. 8, -27, 15;  $y = 2x - 3$       8. 13, 7, 6;  $y = -3x + 1$       9. 12, 0, -1;  $y = \frac{x}{3}$   
 10.  $y = 3x + 2$       11.  $y = \frac{1}{2}x + 4$       12.  $y = x^2 + 1$

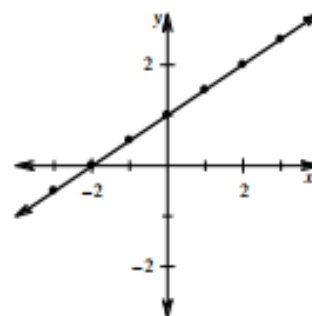
13.

input ( $x$ )	-3	-2	-1	0	1	2	3
output ( $y$ )	-11	-8	-5	-2	1	4	7



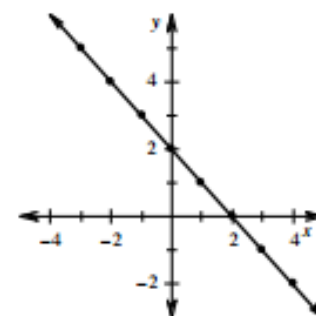
14.

input ( $x$ )	-3	-2	-1	0	1	2	3
output ( $y$ )	-0.5	0	0.5	1	1.5	2	2.5



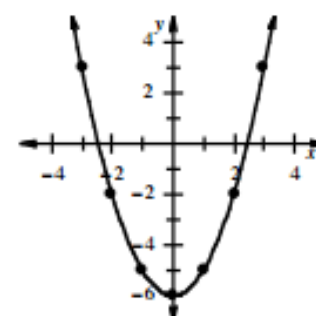
15.

input ( $x$ )	-3	-2	-1	0	1	2	3
output ( $y$ )	5	4	3	2	1	0	-1



16.

input ( $x$ )	-3	-2	-1	0	1	2	3
output ( $y$ )	3	-2	-5	-6	-5	-2	3



## Distributive Property 3.2.5 Answers

### Answers

- |     |  |     |  |     |                |     |                  |
|-----|--|-----|--|-----|----------------|-----|------------------|
| 1.  | $(6 \cdot 9) + (6 \cdot 4) = 54 + 24 = 78$ | 2.  | $(4 \cdot 9) + (4 \cdot 8) = 36 + 32 = 68$ |     |                |     |                  |
| 3.  | $56 + 42 = 98$                             | 4.  | $35 + 20 = 55$                             | 5.  | $60 + 21 = 81$ | 6.  | $240 + 36 = 276$ |
| 7.  | $320 + 24 = 344$                           | 8.  | $420 + 48 = 468$                           | 9.  | $3x + 18$      | 10. | $5x + 35$        |
| 11. | $8x - 32$                                  | 12. | $6x - 60$                                  | 13. | $4x + 32$      | 14. | $5x + 10$        |
| 15. | $-7x - 7$                                  | 16. | $-4y - 12$                                 | 17. | $-3y + 15$     | 18. | $-5b + 20$       |
| 19. | $-x - 6$                                   | 20. | $-x - 7$                                   | 21. | $-x + 4$       | 22. | $x + 3$          |
| 23. | $x^2 + 3x$                                 | 24. | $4x^2 + 8x$                                | 25. | $-5x^2 + 7x$   | 26. | $-2x^2 + 6x$     |

### Answers

- |     |            |     |             |     |                |     |            |
|-----|------------|-----|-------------|-----|----------------|-----|------------|
| 1.  | $6(x+2)$   | 2.  | $5(y-2)$    | 3.  | $4(2x+5z)$     | 4.  | $x(x+y)$   |
| 5.  | $8(m+3)$   | 6.  | $8(2y+5)$   | 7.  | $4(2m-1)$      | 8.  | $5(5y-2)$  |
| 9.  | $2x(x-5)$  | 10. | $21(x^2-3)$ | 11. | $21x(x-3)$     | 12. | $5(3y+7)$  |
| 13. | $4(x+y+z)$ | 14. | $6(x+2y+1)$ | 15. | $7(2x^2-7x+4)$ | 16. | $x(x-1+y)$ |