

**ANSWER KEY**

**Algebra I** | **LESSON 2-2**

**Activities, Games, and Puzzles**

**1.** Each value of *x* increases by 1 from one value of *x* to the next.

**2.** Answers may vary. Sample: In Function A, the *y*-value increases by 2 each time.

**3.** Answers may vary. Sample: *y* = –2*x* + 3; the *y*-value decreases by 2 each time.

**Additional Vocabulary Support**

**1.** ordered pairs

**2.** linear function

**3.** input or independent variable

**4.** geometric relationship

**5.** function

**6.** independent variable or input

**7.** output or dependent variable

**8.** dependent variable or output

**9.** perimeter

**Enrichment**

**1.** *y* = 3*x*

**2.** *y* = 5*x* – 5

**3.** *y* = 3*x* + 1

**4.** *y* = 7*x* + 1

**5.** *y* = 2*x* + 1

**6.** *y* = –2*x*

**7.** *y* = –8*x*

**8.** Answers will vary. Sample: 1, 4, 7, 10; yes; *y* = 3*x* – 2

**1**

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**ANSWER KEY**

**Practice Form G**

**1.** The perimeter is 2 more than the number of triangles; *p* = *n* + 2





**2.** The perimeter is 2 more than twice the number of squares; *p* = 2*n* + 2





**2**

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**ANSWER KEY**

**3.** yes; the output *y* is 1 more than twice the input *x*; *y* = 2*x* + 1



**4.** yes; the output *y* is 6 more than the input *x*; *y* = *x* + 6



**5.** function; the distance traveled is 55 times the number of hours; *d* = 55*t*



**6.** function; the calories burned are 5 times the number of minutes spent exercising;

*c* = 5*m*



**3**

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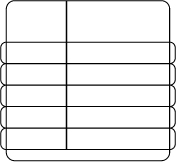


**ANSWER KEY**

**7.** The function is linear; The points on the graph can be connected by a straight line.



**8.** *b* = 5*s*



|  |  |
| --- | --- |
| **Cups of**  **soap, *S*** | **Cups of bubble solution, *b*** |
| 0 | 0 |
| 1 | 5 |
| 2 | 10 |
| 3 | 15 |
| 4 | 20 |



**4**

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**ANSWER KEY**

**Practice Form K**



**1.**



The perimeter of the shapes is twice the number of rectangles plus four.  
*P* = 2*n* + 4

**2.** Function; each *y*-value is 2 more than the *x*-value; *y* = *x* + 2



**3.** Function; each *y*-value is 5 more than twice the *x*-value; *y* = 2*x* + 5



**5**

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**ANSWER KEY**

**4.** Independent variable: *x*; dependent variable: *y*; *y* = *x* – 2; The value of *y* is the value  
of *x* minus 2.



**5.** Independent variable: *n*; dependent variable: *m*; *m* = –3*n +* 1; The value of *m* is –3  
times the value of *n* plus 1.



**6.** The relationship is a linear function; the graph of the ordered pairs forms a straight line.



**6**

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**ANSWER KEY**

**Reteaching**



**1. a.**

**b.** (1, 15), (2, 24), (3, 33)



**c.**

**d.** The perimeter is 6 more than 9 times the number of trapezoids.

**e.** *p* = 9*n* + 6



**2. a.**

**b.** (1, 6), (2, 10), (3, 14)



**c.**

**d.** The surface area of 2 more than 4 times the number of cubes.

**e.** *s* = 4*n* + 2

**7**

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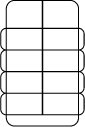
**ANSWER KEY**

**Think About a Plan**

**1.** 40 mi on a charged battery, 50 mi on one gallon of gas after the battery has been used.

**2.** Before using any gas, the car can travel 40 mi. After that, the car travels 50 additional  
mi/gal.

**3.** *m* = 50*g* + 40, where *m* = miles traveled and *g* = gallons of gas



|  |  |
| --- | --- |
| ***g*** | ***m*** |
| 0 | 40 |
| 1 | 90 |
| 2 | 140 |
| 3 | 190 |

**4.**



**5.**

**6.** yes; *g* is the independent variable and *m* is the dependent variable; the miles traveled  
depend on the gallons of gas used.

**8**

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