Name _____ Date _____ Class _____

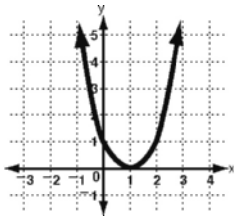
LESSON 1-7

Practice A

Function Notation

Find each value of the function.

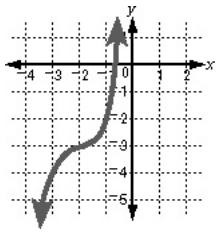
1. $f(x) = -5x + 9$ $\quad f(3) = -5(\_\_\_\_\_) + 9 = -\_\_\_\_\_ + 9 = \_\_\_\_\_$

2. 

$f(0) = \_\_\_\_\_$

$f(1) = \_\_\_\_\_$

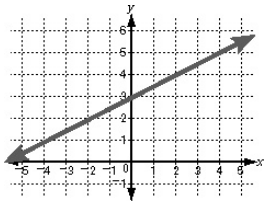
$f(2) = \_\_\_\_\_$

3. 

$f(-1) = \_\_\_\_\_$

$f(-2) = \_\_\_\_\_$

$f(-3) = \_\_\_\_\_$

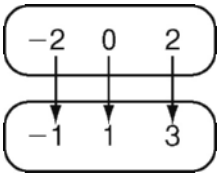
4. 

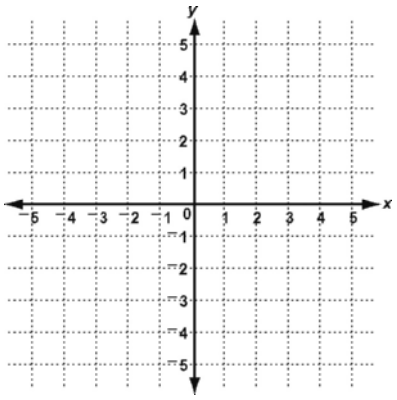
$f(-4) = \_\_\_\_\_$

$f(0) = \_\_\_\_\_$

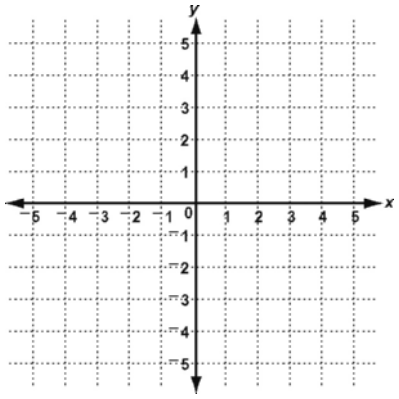
$f(2) = \_\_\_\_\_$

Graph each function.

5. 

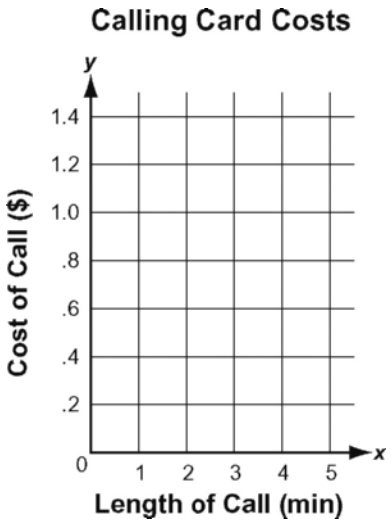


6. $f(x) = 2x - 3$



7. Ty uses the function $g(x) = 0.5 + 0.2(x - 1)$ to calculate the cost in dollars of using a calling card to make a long-distance call lasting x minutes. The variable x must be a whole number. Graph the function. Then determine the cost of a 10-minute call.

_____

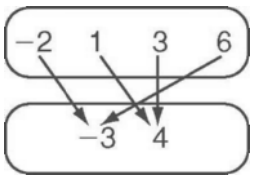


This is a function.

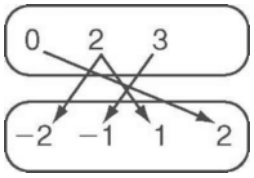
6. Yes, each value of x is associated with only 1 value of y.
7. No, each car model is manufactured as many individual cars.
8. Yes, there is only 1 score associated with each test date.

Practice C

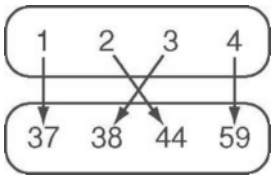
1. Domain: {–2, 1, 3, 6}; Range: {–3 , 4}



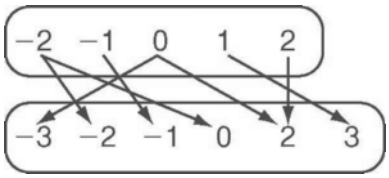
2. Domain: {0, 2, 3}; Range: {–2, –1, 1, 2}



3. Domain: {1, 2, 3, 4};
Range: {37, 38, 44, 59}



4. Domain: {–2, –1, 0, 1, 2};
Range: {–3, –2, –1, 0, 2, 3}



5. not a function; function
6. function; not a function
7. function; not a function
8. not a function; not a function
9. function; not a function
10. not a function; function

Reteach

1. 2002, 2003, 2004, 2005}; 28, 35, 42, 46}
2. –3, –2, –1, 0}; –1, 0, 1, 2}
3. Function
4. Not a function; possible answer: (1, 0), (1, –2)

Challenge

1. V, W, X, Z; Y: (3, 3) does not exist because 3 is not greater than 3.
2. W, Z; V: 10 is a factor of 20, but 20 is not a factor of 10; X: 8 is a multiple of 4 but 4 is not a multiple of 8; Y: $3 > 2$ but 2 is not greater than 3.
3. V, W, X, Y, Z
4. W, Z

Problem Solving

1. Yes; each calorie value has only one fat value.
2. Yes; each calorie value has only one carbohydrate value.
3. No; the carbohydrate value 12.2 has two calorie values, 102 and 83.
4. D
5. G
6. B
7. H

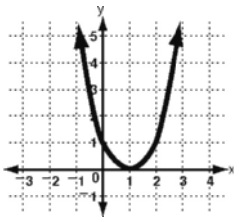
Reading Strategies

1. –2, 0, 1, 2; domain is the set of x values.
2. 4, 2, 0, –4, –6; range is the set of y values.
3. Not a function because the x value –2 is repeated
4. The relation is a function because no input values are repeated.

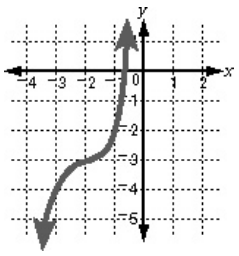
LESSON 1-7

Practice A

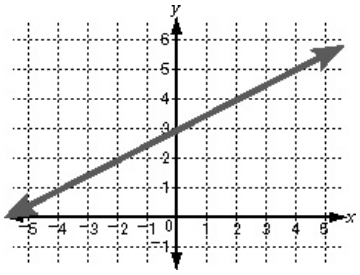
1. 3; 15; –6
2. 1; 0; 1



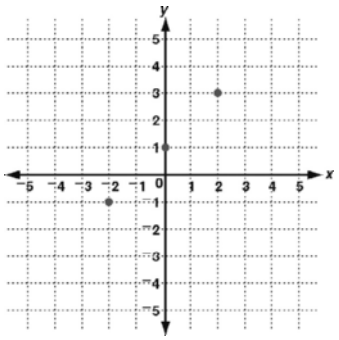
3. –2; –3; –4



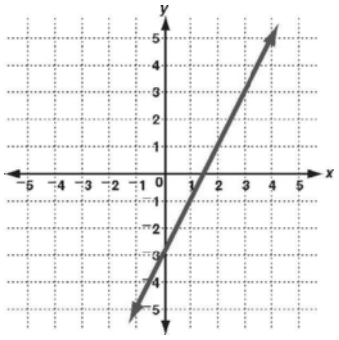
4. 1; 3; 4



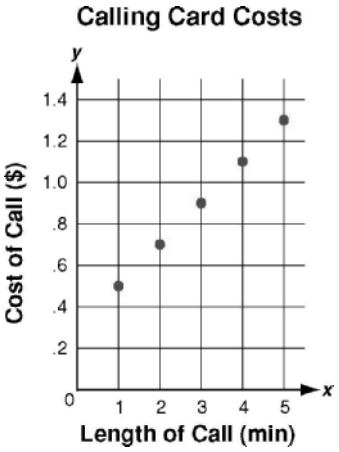
5.



6.



7. $2.30



Practice B

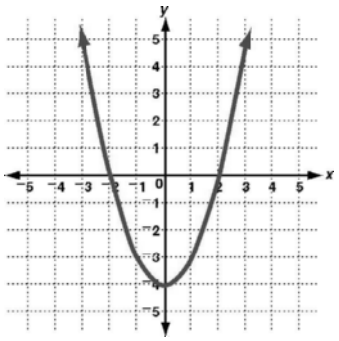
1. 6, 2, –4

2. $-2, -3, -\frac{3}{4}$

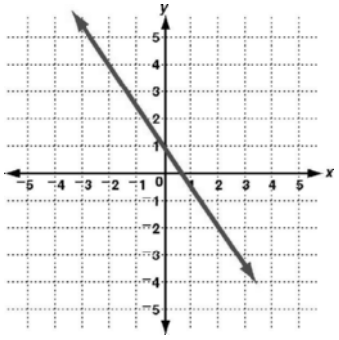
3. $2, 0, 8\frac{1}{4}$

4. $-\frac{3}{4}, -1, -\frac{1}{4}$

5. 0, –4



6. 4, 1



7. $f(c) = \frac{0.77c}{1.24}; f(5) = 3.10;$ the value of \$5 Canadian is equivalent to 3.10 euros.

8. $f(p) = 0.85p - 200$; $f(2500) = 1925$; \$1925 is the final, discounted price of a computer with an original price of \$2500.

Practice C

1. $8, 5\frac{7}{8}, 5.6, 5\frac{1}{4}$

2. $-54, -\frac{11}{9}, -9, 54$

3. $-2\frac{3}{4}, -2, -\frac{1}{2} - 2\frac{3}{4}$

4. $-1, \frac{1}{4}, 1\frac{1}{4}, 2$

5. Possible answer: The domain is a positive whole number, x, representing the number of people at a party; the range is a positive whole number, $\frac{3x}{8}$, representing the number of pizzas needed.

6. Possible answer: The domain is a positive rational number, m, representing