

Chapter 4 Practice Test

Score _____

Write the letter for the correct answer in the blank at the right of each question.

$$-8 = -1 - 7 \text{ } x \text{ rule}$$

$$-8 = \frac{1}{2}(-2) - 7$$

1. Which ordered pair is *not* a point on the graph of $y = \frac{1}{2}x - 7$?

- A. $(1, -6\frac{1}{2})$ B. $(-2, -8)$ C. $(0, -7)$ D. $(2, 8)$

1. D

2. What is $f(-2)$ if $f(x) = \frac{1}{2}x$?

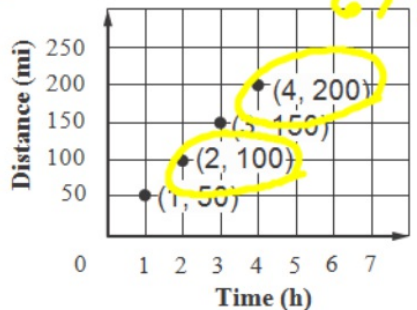
$$f(-2) = \frac{1}{2}(-2) = -1$$

$$8 = \frac{1}{2}(2) - 7$$

$$8 = 1 - 7 \text{ } x \text{ rule}$$

2. D

3. The graph at the right shows Jeremy's distance from home each hour he is on a car trip. How many miles will he be from home after 10 hours?



$$6,390$$

$$(10, 500)$$

3. D

500 miles.

initial:

8

4. Which table represents a linear function?

F. $-2 -2 -2$

x	5	3	1	-1
y	6	8	10	12

G. $+2 +2 +2$

x	-3	-1	1	3
y	1	4	9	16

H. $+2 +2 +2$

x	-2	0	2	4
y	0	1	3	6

I. $+2 +2 +2$

x	7	4	1	-2
y	-1	-3	-6	-9

$$m = \frac{y_2 - y_1}{x_2 - x_1}$$

F

Tanya $y = 1x + 8$

$y = 0.05x + 0$

initial:

0

5. Juana's monthly cost of sending text messages can be represented by the function $y = 0.05x$, where y represents the total cost and x represents the number of text messages. The table shows Tanya's monthly cost of sending text messages. Which statement is *not* true?

x	y
Messages	Cost (\$)
20	10
30	11
40	12
50	13

$y = mx + b$

$$m = \frac{1}{10} = \frac{11-10}{30-20}$$

$$10 = \frac{1}{10}(20) + b$$

$$10 = 2 + b \Rightarrow b = 8$$

D

- A. Tanya's initial cost is greater than Juana's initial cost.
- B. Tanya pays more per text than Juana.
- C. Juana pays \$7.50 for sending 150 text messages.
- D. Tanya pays \$20 for sending 150 text messages.

5. _____

6. Which of the following represents a nonlinear function?

F. $y = 5x + 7$

G. $y = x^2$

H. $y = -2x + 0$

I. $y = 1x + 0$

6. **G**

$y = mx + b$

Course 3 • Chapter 4 Functions

$y = mx + b$

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⑦ $y = mx + b$ $(5, 25)$ $25 = (2)(5) + b$
 $25 = 10 + b$
 $b = 15$
 $m = \frac{2}{1}$

7. Nate has a certain number of songs on his MP3 player. Each week, he plans to add 2 more songs. After 5 weeks, he had 25 songs on his MP3 player. Which statement is true?

- A. Nate adds 5 songs on his MP3 player per week.
- B. Nate adds 10 songs on his MP3 player per week.
- C. The initial number of songs on Nate's MP3 player is 15.
- D. The initial number of songs on Nate's MP3 player is 2.

$y = 2x + 15$

7. **C**

8. State the domain and range for the following relation.
 $\{(-4, 4), (1, 2), (0, 3), (3, 2)\}$

D: $\{-4, 1, 0, 3\}$
R: $\{4, 2, 3\}$
 8.

9. Complete the function table for $f(x) = -2x + 1$.

$$\begin{array}{l}
 f(-2) = -2(-2) + 1 \\
 \quad = 4 + 1 = 5 \\
 \hline
 f(1) = -2(1) + 1 = -2 + 1 \\
 \quad = -1 \\
 \hline
 f(0) = -2(0) + 1 = 1 \\
 f(2) = -2(2) + 1 \\
 \quad = -4 + 1 = -3
 \end{array}$$

9.

x	$f(x)$
-2	5
0	1
1	-1
2	-3

For Exercises 10 and 11, consider the following situation.

The grocery store sells cartons of eggs for \$4.50 per carton.