Lesson 2.4.2: Illustrating Linear Functions Total points = 49

A. Answers

1. Yes \checkmark , $m = -6 \checkmark$, $b = -7 \checkmark$, degree = 1 \checkmark

2. Yes
$$\checkmark$$
, $m = 0 \checkmark$, $b = -4 \checkmark$, degree = 0 \checkmark

3. Yes \checkmark , $m = 2\checkmark$, $b = -6\checkmark$, degree = 1 \checkmark

4. No **√**

5. Yes \checkmark , $m = o \checkmark$, $b = o \checkmark$, degree = undefined \checkmark

B. Answers

Linear ✓

4. Not linear ✓

2. Linear ✓

3. Linear ✓

5. Linear ✓

C. Solutions

1. If
$$f(x) = 4x - 1$$
, find:

2. If
$$f(x) = -2x + 3$$
, find:

a.
$$f(1) = -2(1) + 3\sqrt{6}$$
. $f(-2) = -2(-2) + 3\sqrt{6}$. $f(\frac{3}{2}) = -2(\frac{3}{2}) + 3\sqrt{6}$

$$f(1) = -2 + 3\sqrt{6}$$

$$f(-2) = 4 + 3\sqrt{6}$$

$$f(\frac{3}{2}) = -3 + 3\sqrt{6}$$

$$f(\frac{3}{2}) = 0\sqrt{6}$$

3. If
$$f(x) = \frac{3}{2}x + 1$$
, find:

a.
$$f(2) = (\frac{3}{2})(2) + 1$$
 b. $f(-4) = (\frac{3}{2})(-4) + 1$ c. $f(\frac{1}{3}) = (\frac{3}{2})(\frac{1}{3}) + 1$ f $f(2) = 3 + 1$ f $f(-4) = -6 + 1$ f $f(\frac{1}{3}) = \frac{1}{2} + 1$ f $f(\frac{1}{3}) = \frac{3}{2}$

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A. Answers

- 1. Yes \checkmark , $m = -6 \checkmark$, $b = -7 \checkmark$, degree = 1 \checkmark
- 2. Yes \checkmark , $m = o\checkmark$, $b = -4\checkmark$, degree = $o\checkmark$
- 3. Yes \checkmark , $m = 2\checkmark$, $b = -6\checkmark$, degree = 1 \checkmark
- 5. Yes \checkmark , $m = o \checkmark$, $b = o \checkmark$, degree = undefined \checkmark

B. Answers

- Linear ✓
- 4. Not linear ✓
- 2. Linear ✓
- 3. Linear ✓
- 5. Linear ✓

C. Solutions

1. If
$$f(x) = 4x - 1$$
, find:

2. If f(x) = -2x + 3, find:

a.
$$f(1) = -2(1) + 3\checkmark$$
 b. $f(-2) = -2(-2) + 3\checkmark$ c. $f(\frac{3}{2}) = -2(\frac{3}{2}) + 3\checkmark$

$$f(1) = -2 + 3\checkmark \qquad f(-2) = 4 + 3\checkmark \qquad f(\frac{3}{2}) = -3 + 3\checkmark$$

$$f(1) = 1\checkmark \qquad f(-2) = 7\checkmark \qquad f(\frac{3}{2}) = -3 + 3\checkmark$$

$$f(\frac{3}{2}) = -3 + 3\checkmark$$

3. If
$$f(x) = \frac{3}{2}x + 1$$
, find:

a.
$$f(2) = (\frac{3}{2})(2) + 1\checkmark$$
 b. $f(-4) = (\frac{3}{2})(-4) + 1\checkmark$ c. $f(\frac{1}{3}) = (\frac{3}{2})(\frac{1}{3}) + 1\checkmark$

$$f(2) = 3 + 1\checkmark \qquad f(-4) = -6 + 1\checkmark \qquad f(\frac{1}{3}) = \frac{1}{2} + 1\checkmark$$

$$f(2) = 4\checkmark \qquad f(-4) = -5\checkmark \qquad f(\frac{1}{3}) = \frac{3}{2}\checkmark$$

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A. Answers

1. Yes \checkmark , $m = -6 \checkmark$, $b = -7 \checkmark$, degree = 1 \checkmark

2. Yes \checkmark , $m = o \checkmark$, $b = -4 \checkmark$, degree = o \checkmark

3. Yes \checkmark , $m = 2\checkmark$, $b = -6\checkmark$, degree = 1 \checkmark

4. No 🗸

5. Yes \checkmark , $m = o \checkmark$, $b = o \checkmark$, degree = undefined \checkmark

B. Answers

Linear √

4. Not linear ✓

2. Linear ✓

5. Linear ✓ 3. Linear ✓

C. Solutions

1. If f(x) = 4x - 1, find:

a.
$$f(0) = 4(0) - 1\sqrt{}$$
 b. $f(-1) = 4(-1) - 1\sqrt{}$ c. $f(\frac{1}{2}) = 4(\frac{1}{2}) - 1\sqrt{}$
 $f(0) = 0 - 1\sqrt{}$ $f(-1) = -4 - 1\sqrt{}$
 $f(0) = -1\sqrt{}$ $f(\frac{1}{2}) = 2 - 1\sqrt{}$
 $f(\frac{1}{2}) = 1\sqrt{}$

2. If
$$f(x) = -2x + 3$$
, find:

a.
$$f(1) = -2(1) + 3\sqrt{5}$$
 b. $f(-2) = -2(-2) + 3\sqrt{5}$ c. $f(\frac{3}{2}) = -2(\frac{3}{2}) + 3\sqrt{5}$

$$f(1) = -2 + 3\sqrt{5}$$

$$f(-2) = 4 + 3\sqrt{5}$$

$$f(\frac{3}{2}) = -3 + 3\sqrt{5}$$

$$f(\frac{3}{2}) = 0\sqrt{5}$$

3. If
$$f(x) = \frac{3}{2}x + 1$$
, find:

a.
$$f(2) = (\frac{3}{2})(2) + 1$$
 b. $f(-4) = (\frac{3}{2})(-4) + 1$ c. $f(\frac{1}{3}) = (\frac{3}{2})(\frac{1}{3}) + 1$ f $f(2) = 3 + 1$ f $f(-4) = -6 + 1$ f $f(\frac{1}{3}) = \frac{1}{2} + 1$ f $f(\frac{1}{3}) = \frac{3}{2}$

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A. Answers

- 1. Yes \checkmark , $m = -6 \checkmark$, $b = -7 \checkmark$, degree = 1 \checkmark
- 2. Yes \checkmark , $m = 0 \checkmark$, $b = -4 \checkmark$, degree = 0 \checkmark 3. Yes \checkmark , $m = 2 \checkmark$, $b = -6 \checkmark$, degree = 1 \checkmark

- 5. Yes \checkmark , $m = o\checkmark$, $b = o\checkmark$, degree = undefined \checkmark

B. Answers

- Linear ✓
- 4. Not linear ✓
- 2. Linear ✓
- 3. Linear ✓
- 5. Linear ✓

C. Solutions

1. If f(x) = 4x - 1, find:

2. If
$$f(x) = -2x + 3$$
, find:

a.
$$f(1) = -2(1) + 3\sqrt{}$$
 b. $f(-2) = -2(-2) + 3\sqrt{}$ c. $f(\frac{3}{2}) = -2(\frac{3}{2}) + 3\sqrt{}$

$$f(1) = -2 + 3\sqrt{}$$

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$$f(\frac{3}{2}) = -3 + 3\sqrt{}$$

$$f(\frac{3}{2}) = -3 + 3\sqrt{}$$

$$f(\frac{3}{2}) = 0\sqrt{}$$

3. If
$$f(x) = \frac{3}{2}x + 1$$
, find:

a.
$$f(2) = (\frac{3}{2})(2) + 1\checkmark$$
 b. $f(-4) = (\frac{3}{2})(-4) + 1\checkmark$ c. $f(\frac{1}{3}) = (\frac{3}{2})(\frac{1}{3}) + 1\checkmark$

$$f(2) = 3 + 1\checkmark \qquad f(-4) = -6 + 1\checkmark \qquad f(\frac{1}{3}) = \frac{1}{2} + 1\checkmark$$

$$f(2) = 4\checkmark \qquad f(-4) = -5\checkmark \qquad f(\frac{1}{3}) = \frac{3}{2}\checkmark$$