

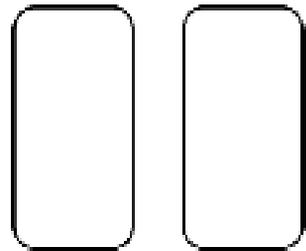
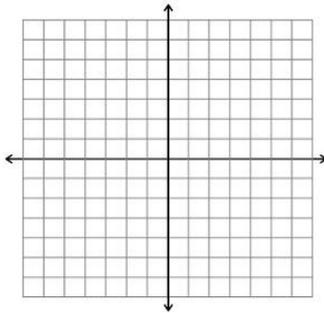
8th Grade Quick Check B

8.F.1a

Goal: *I can identify a relation as a function.*

1. Express the relation $\{(-2, 5), (3, 2), (3, 4), (4, -6)\}$ as a table, as a graph, and as a mapping diagram.

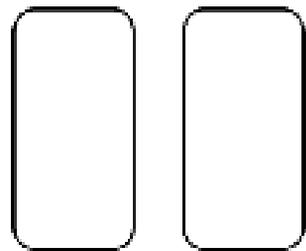
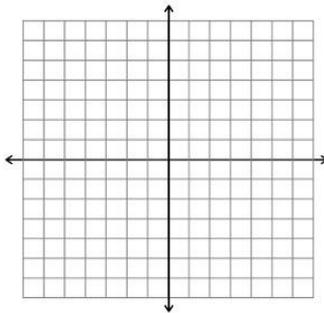
x	y



Is this relation a function? _____

2. Express the relation $\{(-4, 6), (-3, 2), (1, 0), (6, 2)\}$ as a table, as a graph, and as a mapping diagram.

x	y



Is this relation a function? _____

3. Give an example (table, graph, or mapping diagram) of a function and an example which is NOT a function.

Function

NOT a function

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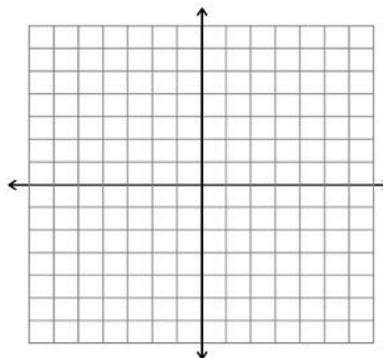
8.F.1b

Goal: I can generate a set of ordered pairs and graph a given function.

1. Graph the function using the table provided. You must show work!

$$f(x) = -2x + 1$$

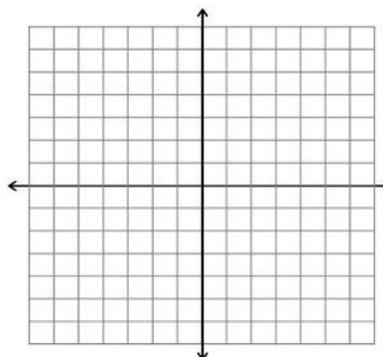
x	f(x)



2. Graph the function using the table provided. You must show work!

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

x	f(x)



3. For $f(x) = 2x^2 + 1$, find $f(x)$ when $x = 3$ and $x = -1$.

$f(3) =$ _____

$f(-1) =$ _____

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8.F.2

Goal: I can compare the properties of two functions represented in different ways.

Directions: Read each situation, then answer the questions by analyzing and comparing the different linear situations.

1. Compare the two linear functions to answer the questions below.

Ravelle has \$105 in his school lunch account. Each day he spends \$3.50 on his lunch (Assume the boys go to school 5 days a week).

Stephen's lunch account is modeled by the table below:

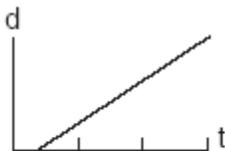
weeks	0	1	2	3	4
balance	150	135	120	105	90

- Who starts with more money in his account? _____
- Who has more money in his account after 1 week has passed? _____
- How much money does each boy spend on lunch each week?

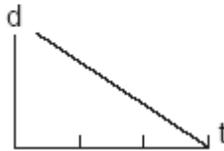
Ravelle: _____

Stephen: _____

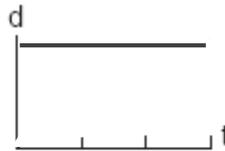
2. For each situation below, use slope to explain which distance vs. time graph would be the best fit for James's distance away from home.



(1)



(2)



(3)

- James leaves his house and walks to school at a steady pace.
- James sits at school all day.
- At the end of the school day, James walks all the way back home.

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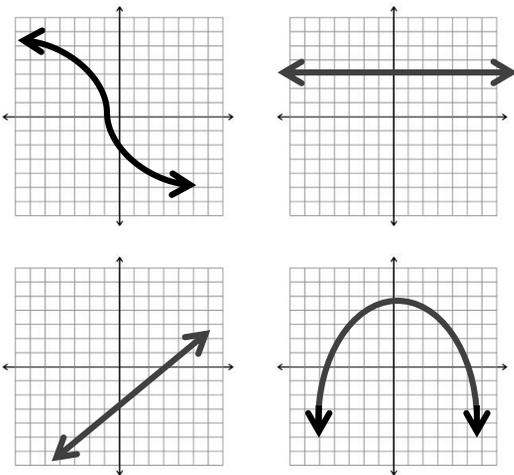
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8.F.3

Goal: I can compare the characteristics of linear and nonlinear functions.

Directions: Determine which of the following represent linear functions.

1. Circle each linear function.



2. Circle each linear function.

$$y = 2x^3 - 4$$

$$y = 3^x$$

$$-\frac{2}{3}x + 4 = y$$

$$y = 7 + x$$

3. Determine if the table represents a linear function.

x	F(x)
0	1
1	2
2	4
3	8
4	16

4. Create a table that represents a linear function and explain why it is linear.

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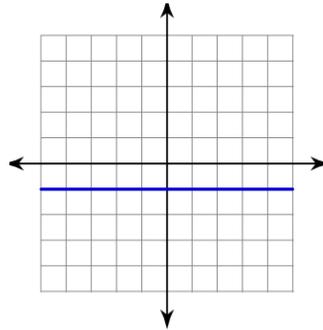
8.F.4

Goal: *I can construct a function to model a linear relationship between two quantities.*
Directions: Construct a linear equation to represent each of the following relationships.

1.

x	y
0	-.5
1	7.5
2	15.5
3	23.5
4	31.5
5	39.5

2.



3. Sarah has a job keeping up one of her neighbors' gardens. She charges them \$30.00 plus \$15.00 per visit for supplies.

- Create a graph to model the relationship.
- Identify the slope _____
- Identify the y-intercept _____
- Write an equation to represent the relationship.

