Name __KEY__   Date __2019__

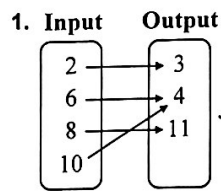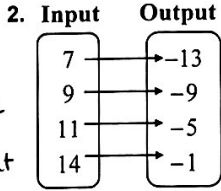# Review 6.1-6.3

List the ordered pairs shown in the mapping diagram. Then determine whether the relation is a function.

1. Input   Output

$2 \rightarrow 3$
$6 \rightarrow 4$
$8 \rightarrow 11$
10

Yes, b/c there is one output for every input

2. Input   Output

$7 \rightarrow -13$
$9 \rightarrow -9$
$11 \rightarrow -5$
$14 \rightarrow -1$

Yes b/c there is only one output for every input

1. $\{(2,3),(6,4),(8,11),(10,4)\}$

2. $\{(7,-13),(9,-9),(11,-5),(14,-1)\}$

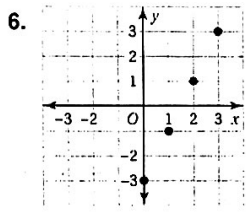Find the value of y for the given value of x.

3. $y = \frac{1}{2}x; \ x = -18$

4. $y = -4x + 6; \ x = 1$

3. $y = -9$

4. $y = 2$

5. Write an equation that describes the function shown by the table.

Input, x	1	2	3	4
Output, y	−5	−10	−15	−20

5. $y = -5x$

Use the graph or table to write a linear function that relates y to x.

6.

7.

x	−2	0	2	4
y	5	4	3	2

6. $y = 2x - 3$

7. $y = -\frac{1}{2}x + 4$

8. The table shows the amount of gasoline g (in gallons) left in your tank after you travel m miles.

Miles, m	Gallons, g
0	20
20	19
40	18
60	17

a. Write a linear function that relates the amount of gasoline to the traveling distance.

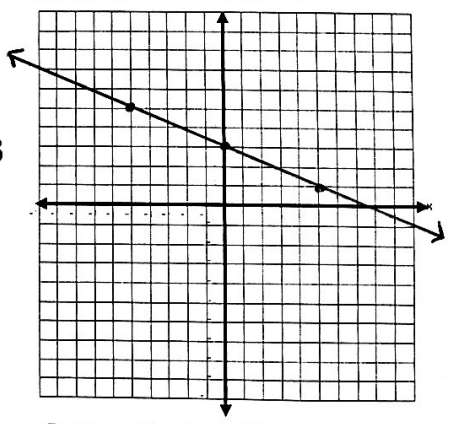**b.** How many gallons of gasoline are left after you drive 120 miles?

8. a. $y = -\frac{1}{20}x + 20$

   b. 14 gallons

9. Graph the equation: $y = -\frac{2}{5}x + 3$

Slope: $\frac{-2}{5}$

y-intercept: 3

10. You are packing candles in boxes. You can fit 15 candles in each box.

a. Write a function that represents the number of candles that you pack into x boxes.

b. How many boxes do you need to pack 75 candles?

10. a. $y = \frac{x}{15}$

    b. 5 boxes