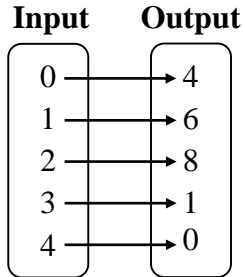


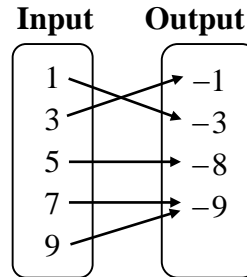
# Functions Review

List the ordered pairs shown in the mapping diagram.

1)



2)



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

3)  $y = x - 5; x = 9$

4)  $y = 4x; x = -7$

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

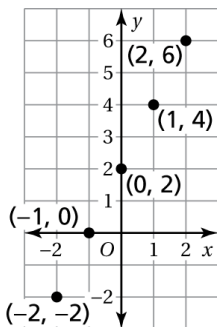
<b>Input, <math>x</math></b>	0	1	2	3	4
<b>Output, <math>y</math></b>	0	5	10	15	20

6) Write a function rule for the statement, "The output is 4 less than the input." Then complete the table.

<b>Input, <math>x</math></b>	1	2	3	4
<b>Output, <math>y</math></b>				

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

7)

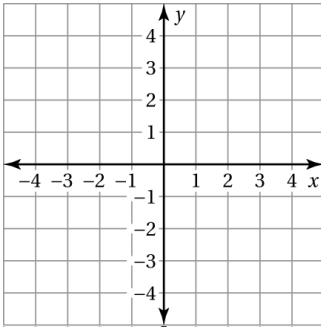


8)

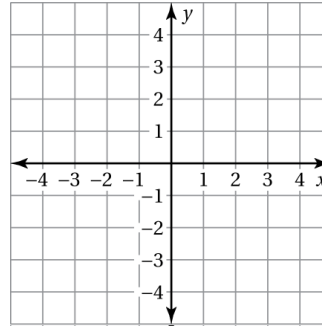
<b><math>x</math></b>	-1	0	1	2
<b><math>y</math></b>	-4	0	4	8

Solve the system of linear equations by graphing.

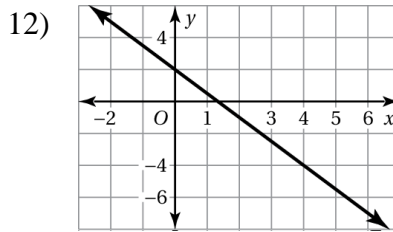
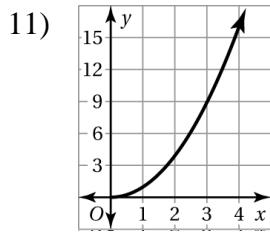
9)  $y = -2x + 1$



10)  $y = \frac{1}{4}x$



Does the table or graph represent a linear or nonlinear function? Explain.



13)

<b>Input, <math>x</math></b>	1	2	3	4
<b>Output, <math>y</math></b>	0	3	8	15

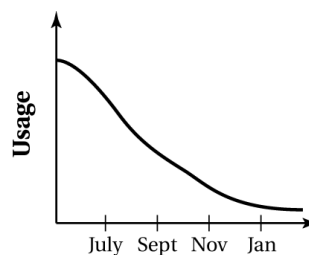
14)

<b>Input, <math>x</math></b>	1	2	3	4
<b>Output, <math>y</math></b>	-1	-3	-5	-7

15) The table shows the number  $y$  of muffins baked in  $x$  pans. What is the missing  $y$ -value that makes the table represent a linear function?

<b>Pans, <math>x</math></b>	3	4	5
<b>Muffins, <math>y</math></b>	18	?	30

16) The graph shows the water usage for a business. Describe the change in usage from July to December.



17) Dan returns \$42.50 worth of merchandise and then buys 4 shirts for \$7.84 each. How much money does Dan have left?

18) Which method can you use to eliminate a variable from the following system of equations?

A. Add the first equation to the second equation.

$$2x - 6y = 3$$

B. Subtract the first equation from the second equation.

$$4x + y = -3$$

C. Add twice the first equation to the second equation.

D. Subtract twice the first equation from the second equation.

19) The profit  $y$  from selling  $x$  muffins can be represented by a linear function. The profit from selling 5 muffins is \$4. The profit from selling 7 muffins is \$8. What is the slope of the line represented by the data?

F.  $\frac{1}{2}$

G.  $\frac{4}{5}$

H. 1

I. 2

20) To repair an air conditioner, David charges a one-time fee for a service call plus an hourly rate for the time required for the repair.

a. Complete the input-output table below for the total amount  $y$  that David will charge for a repair that requires  $x$  hours.

<b>Input, <math>x</math></b>	1	2	3	4	5	6
<b>Output, <math>y</math></b>	120	165	210			

b. What is the hourly rate that David charges? Explain your reasoning.

Hourly rate \$\_\_\_\_\_