

READY, SET, GO!

Name

Period

Date

**READY**

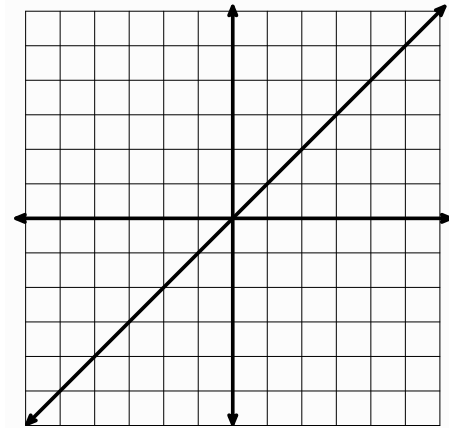
Topic: Transforming lines

1. Graph the following linear equations on the grid. The equation  $y = x$  has been graphed for you. For each new equation explain what the number 3 does to the graph of  $y = x$ . Pay attention to the y-intercept, the x-intercept, and the slope. Identify what changes in the graph and what stays the same.

a.  $y = x + 3$

b.  $y = x - 3$

c.  $y = 3x$

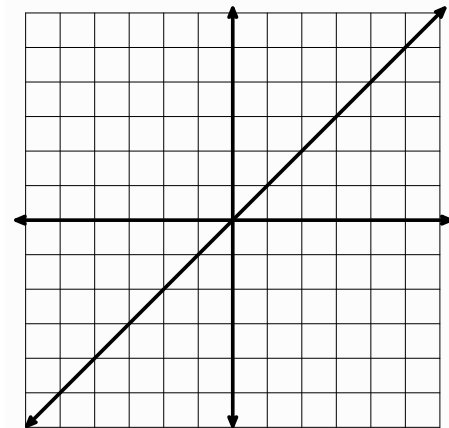


2. The graph of  $y = x$  is given. (See figure 2.) For each equation predict what you think the number -2 will do to the graph. Then graph the equation.

a.  $y = x + (-2)$   
Prediction:

b.  $y = x - (-2)$   
Prediction:

c.  $y = -2x$   
Prediction:



**SET**

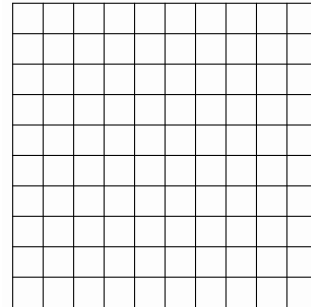
Topic: Distinguish between linear, exponential and quadratic functions

For each relation given:

- a. Identify whether or not the relation is a function. (If it's not a function, skip b - d.)
- b. Determine if the function is Linear, Exponential, Quadratic or Neither.
- c. Describe the type of growth.
- d. Express the relation in the indicated form.

3. I had 81 freckles on my nose before I began using vanishing cream. After the first week I had 27, the next week 9, then 3 . . .

- a. Function?
- b. Linear, Exponential, Quadratic or Neither
- c. How does it grow?
- d. Make a graph. Label your axes and the scale Show all 4 points.

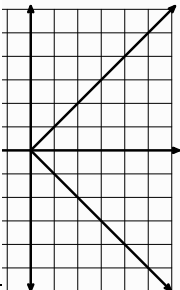


4.

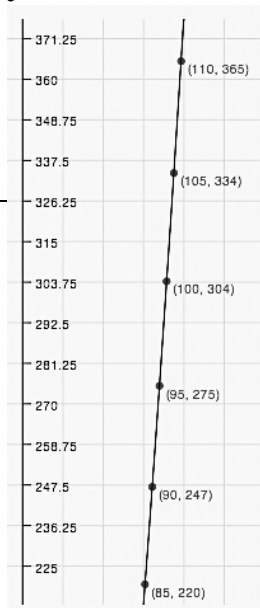
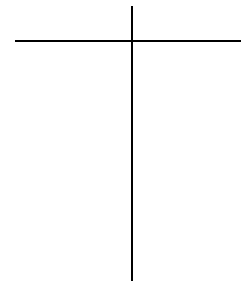
x	y
0	81
1	$80\frac{2}{3}$
2	$80\frac{1}{3}$
3	80
4	$79\frac{2}{3}$

- a. Function?
- b. Linear, Exponential, Quadratic or Neither
- c. How does it grow?
- d. Write the explicit equation.

5.



- a. Function?
- b. Linear, Exponential, Quadratic or Neither
- c. How does it grow?
- d. Create a table



6. Speed in mph of a baseball vs. distance in ft.

- a. Function?
- b. Linear, Exponential, Quadratic or Neither
- c. How does it grow?
- d. Predict the distance the baseball flies, if it leaves the bat at a speed of 115 mph.

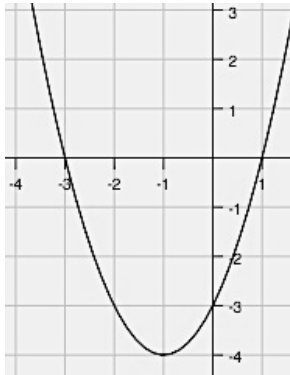
**GO**

Topic: Matching function representations

Match the function on the left with the equivalent function on the right.

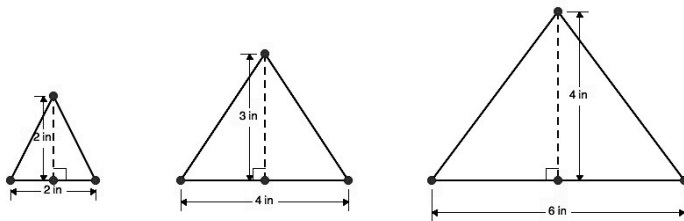
\_\_\_ 7.  $f(x) = -2x + 5$

\_\_\_ 8.



\_\_\_ 9. I put \$7000 in a savings account that pays 3% interest compounded annually. I plan to leave it in the bank for 20 years. The amount I will have then.

\_\_\_ 10. The area of the triangles below.



\_\_\_ 11.  $f(0) = 5; f(n) = 2 * f(n-1)$

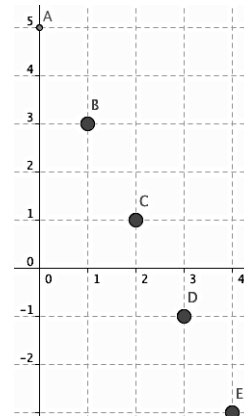
\_\_\_ 12.  $f(0) = 5; f(n) = f(n-1) - 2$

13.

x	-7.75	-1/4	1/2	11.6
f(x)	7.75	1/4	-1/2	-11.6

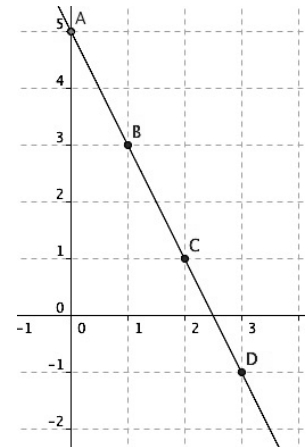
a.  $f(x) = 5(2)^x$

b.



c.  $f(1) = 2; f(n+1) = f(n) + 2n + 2$

d.



e.  $y + x = 0$

f.  $y = (x - 1)(x + 3)$

g.  $A = 7000(1.03)^{20}$