

Ready, Set, Go!



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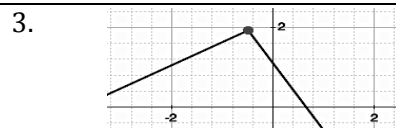
Ready

Topic: Recognizing functions

Identify which of the following representations are functions. If it is NOT a function state how you would fix it so it was.

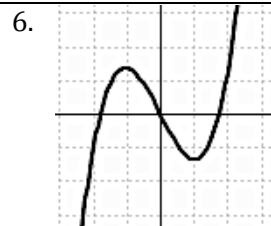
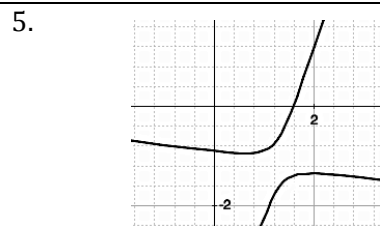
1. $D = \{(4,-1) (3, -6) (2, -1) (1, 2) (0, 4) (2, 5)\}$

2. The number of calories you have burned since midnight at any time during the day.



4.

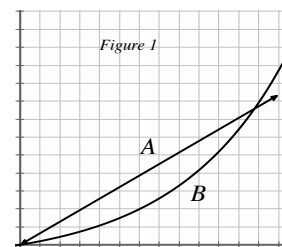
x	-12	-8	-6	-4
f(x)	25	25	25	25



Set

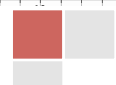
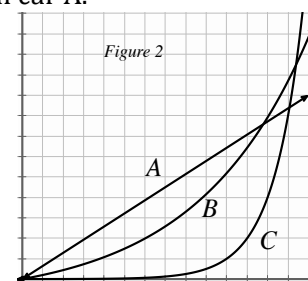
Topic: Comparing rates of change in linear, quadratic, and exponential functions

The graph at the right shows a time vs. distance graph of two cars traveling in the same direction along the freeway.



7. Which car has the cruise control on? How do you know?
8. Which car is accelerating? How do you know?
9. Identify the interval in *figure 1* where car A seems to be going faster than car B.
10. Identify the interval in *figure 1* where car B seems to be going faster than car A.
11. What in the graph indicates the speed of the cars?

12. A third car *C* is now shown in the graph (see *figure 2*). All 3 cars have the same destination. If the destination is a distance of 12 units from the origin, which car do you predict will arrive first? Justify your answer.

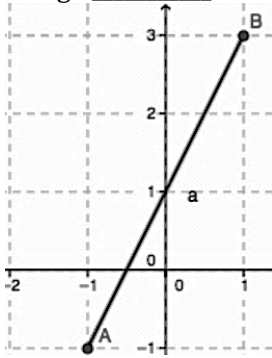


Go

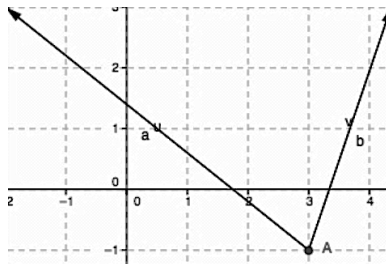
Topic: Identifying domain and range from a graph.

State the domain and range of each graph. Use interval notation where appropriate.

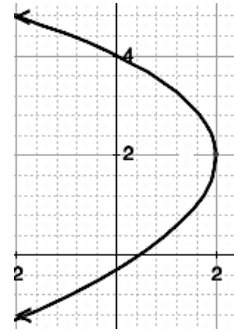
13a. Domain _____
b. Range _____



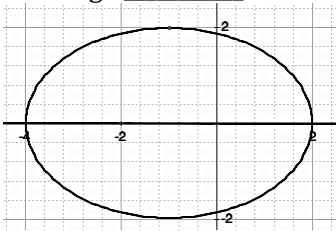
14a. Domain _____
b. Range _____



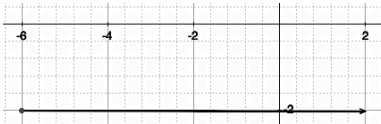
15a. Domain _____
b. Range _____



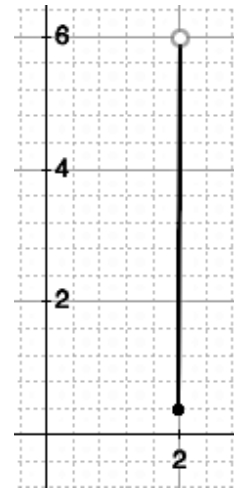
16a. Domain _____
b. Range _____



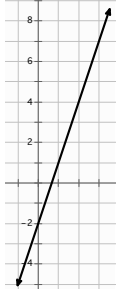
17a. Domain _____
b. Range _____



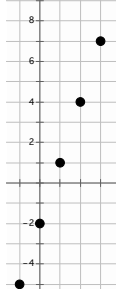
18a. Domain _____
b. Range _____



19a. Domain _____
b. Range _____



20a. Domain _____
b. Range _____



21. Are the domains of #19 and #20 the same? Explain.



Ready, Set, Go!



Ready

Topic: transforming lines

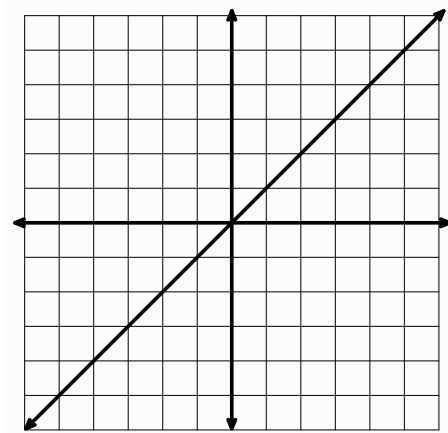
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1. Graph the following linear equations on the grid. The equation $y = x$ has been graphed for you. For each new equation explain what the number 3 does to the graph of $y = x$. Pay attention to the y-intercept, the x-intercept, and the slope. Identify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

a. $y = x + 3$

b. $y = x - 3$

c. $y = 3x$

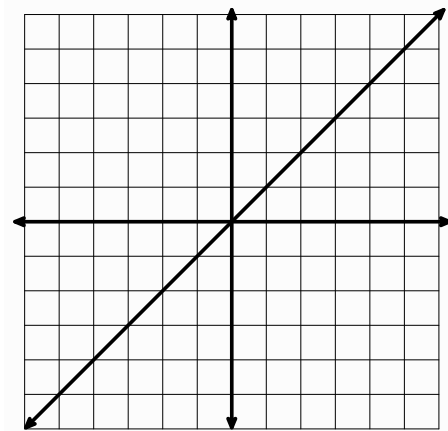


2. The graph of $y = x$ is given. (See figure 2.) For each equation predict what you think the number -2 will do to the graph. Then graph the equation.

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

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

c. $y = -2x$
Prediction:



Set

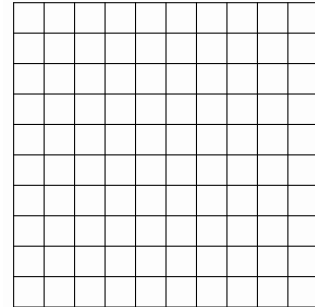
Topic: Distinguishing between linear, exponential, and quadratic functions

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.

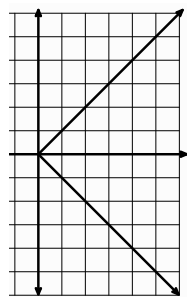


4.

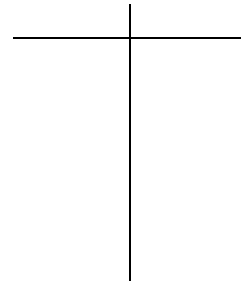
x	y
0	81
1	$80\frac{2}{3}$
2	$80\frac{1}{3}$
3	80
4	$79\frac{2}{3}$

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

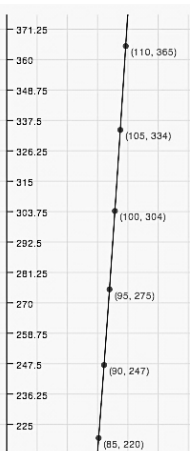
5.



- 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

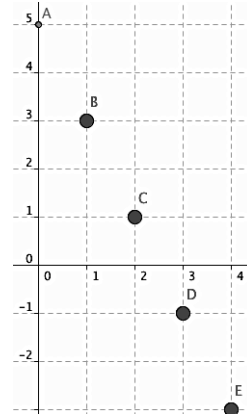
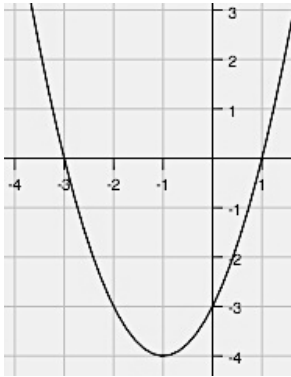
Match the function on the left with the equivalent function on the right.

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

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

___ 8.

b.

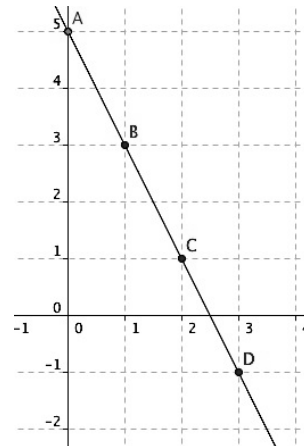
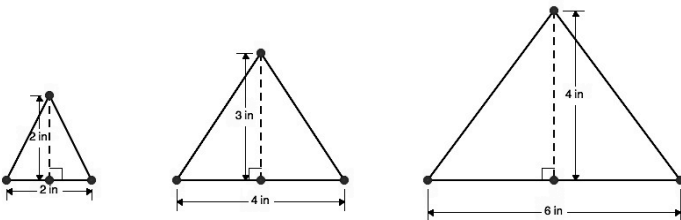


___ 9. I put \$7000 in a savings account that pays 3% interest compounded annually. I plan to leave it in the bank for 20 years. The amount I will have then.

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

___ 10. The area of the triangles below.

d.



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

e. $y + x = 0$

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

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

___ 13.

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

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

