

Compute....

Decide whether each relation represents a linear relationship (L) or a non-linear relationship (N).

1.)

x	y
1	1
2	3
3	6
4	10

2.)

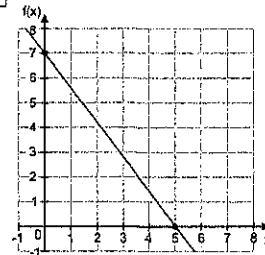
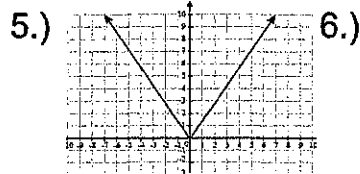
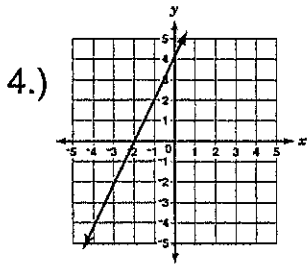
x	y
3	13
5	25
7	37
9	49

3.)

x	y
1	2
2	7
3	12
5	22

4.)

x	y
-1	-3
-7	2
-13	7
-20	-2



7.) $y = x^2$

8.) $y = 9x$

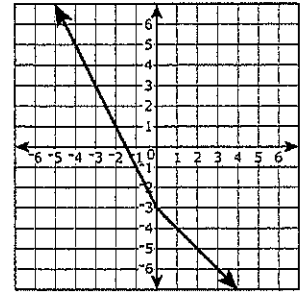
9.) $y = x + 2$

CCSS.MATH.CONTENT.8.F.A.3

Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear.

Justify....

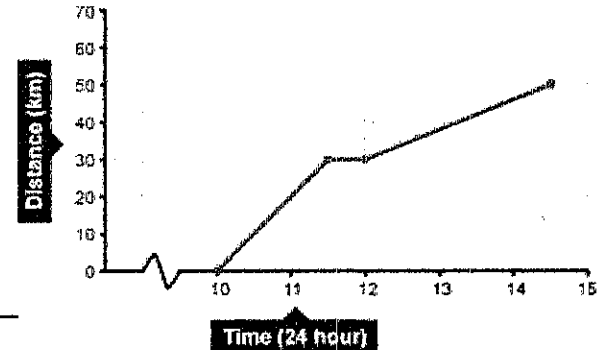
1.) Explain why the graph below is or is not linear.



3.) The graph to the right is not linear. Explain what real-life event(s) could have occurred to make the relationship non-linear.

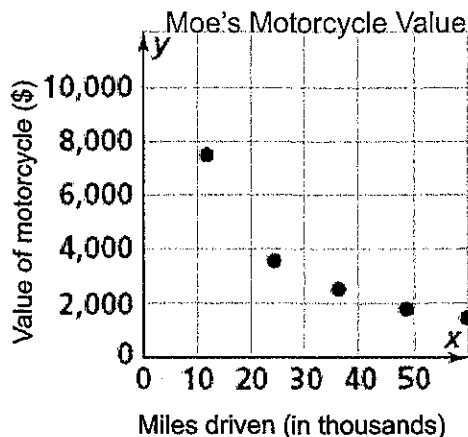
x	y
-1	-5
2	4
3	7
4	10

2.) Explain why the table to the right is or is not linear.



Apply....

1.) The graph below shows the value of Moe's motorcycle given the number of thousands of miles driven. Use the graph to answer the questions.



a. Is the value of the graph linear or non-linear? What does that mean in terms of its value?

b. What price would you predict that Moe purchased the bike for if it had zero miles driven?

Create....

For each real-life linear relationship below describe something that could happen to make the relationship non-linear.

