2.3

READY, SET, GO! Name Period Date

READY

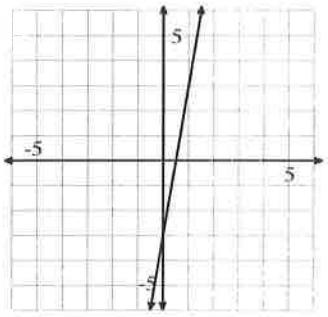
Topic: Comparing rates of change in both linear and exponential situations.

Identify whether situation "a" or situation "b" has a greater rate of change.

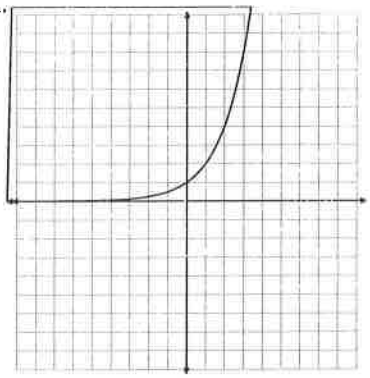
1. a.

x	y
-10	-48
-9	-43
-8	-38
-7	-33

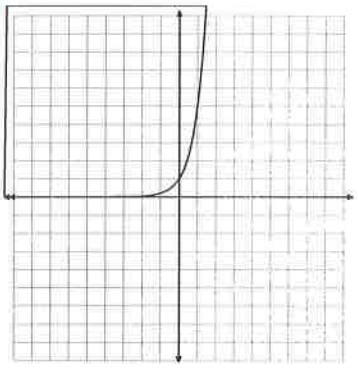
b.



2. a.



b.



3. a. Lee has $25 withheld each week from his salary to pay for his subway pass.

b. Jose owes his brother $50. He has promised to pay half of what he owes each week until the debt is paid.

4. a.

x	6	10	14	18
y	13	15	17	19

b. The number of rhombi in each shape.

Figure 1 Figure 2 Figure 3

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

b. In the children's book, *The Magic Pot,* every time you put one object into the pot, two of the same object come out. Imagine that you have 5 magic pots.

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SET

Topic: Recognizing linear and exponential functions.

Based on each of the given representations of a function determine if it is linear, exponential or neither.

6. The population of a town is decreasing at a rate of 1.5% per year.

exponential

7. Joan earns a salary of $30,000 per year plus a 4.25% commission on sales.

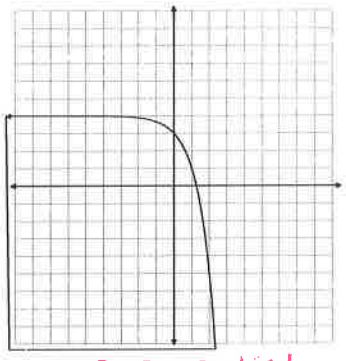
exponential

8. $3x + 4y = -3$

linear

9. The number of gifts received each day of "The 12 Days of Christmas" as a function of the day. ("On the 4th day of Christmas my true love gave to me, 4 calling birds, 3 French hens, 2 turtledoves, and a partridge in a pear tree.") neither

10.



exponential

11.

Side of a square	Area of a square
1 inch	1 in²
2 inches	4 in²
3 inches	9 in²
4 inches	16 in²

neither

GO

Topic: Geometric means

For each geometric sequence below, find the missing terms in the sequence.

12.

x	1	2	3	4	5
y	2	6	18	54	162
		or -6		or -54	

13.

x	1	2	3	4	5
y	1/9	-1/3	1	-3	9

14.

x	1	2	3	4	5
y	10	5	2.5	1.25	0.625
		or -5		or -1.25	

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15.

x	1	2	3	4	5
y	g	gz	gz^2	gz^3	gz^4

16.

x	1	2	3	4	5
y	-3	-9 or 9	-27	-81 or 81	-243

Find the rate of change (slope) in each of the exercises below.

17.

x	g(x)
-5	11
-3	4
-2	0.5
0	-6

$m = -3.5$

18.

t	h(t)
3	13
8	23
18	43
23	53

$m = 2$

19.

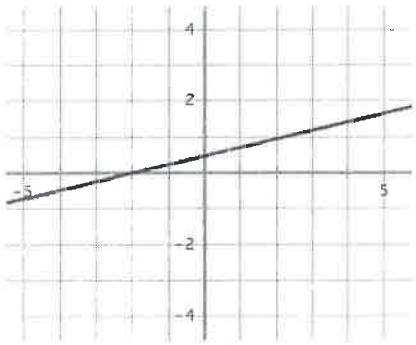
n	f(n)
-7	20
-5	24
-1	32
2	38

$m = 2$

20. (2, 5) (8, 29)

$m = 4$

21.



$m = \frac{1}{4}$

22. (-3, 7) (8, 29)

$m = 2$

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