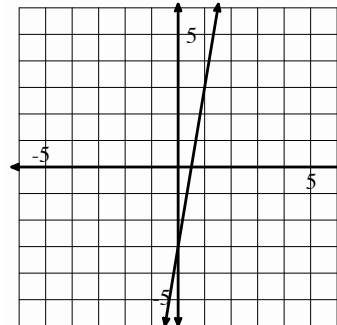## READY

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

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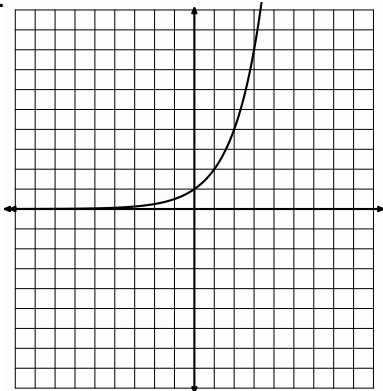
1. a.

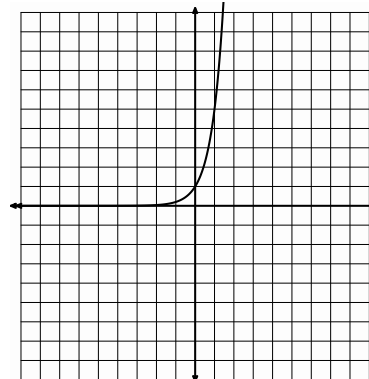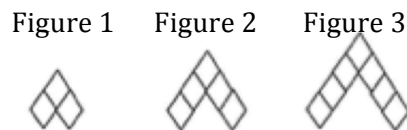| x	y
-10	-48
-9	-43
-8	-38
-7	-33

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.

SET
Topic: Recognizing linear and exponential functions.
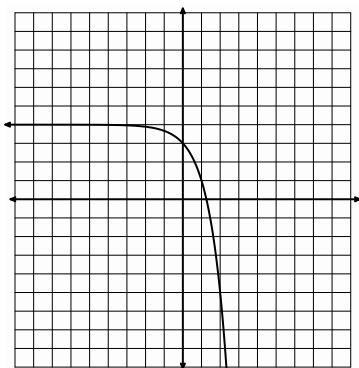**Based on each of the given representations of a function determine if it is linear, exponential or neither**.

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

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

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

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.")

10.

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

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				162

13.

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

14.

x	1	2	3	4	5
y	10				0.625

15.

x	1	2	3	4	5
y	g				gz^4

16.

x	1	2	3	4	5
y	-3				-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

18.

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

19.

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

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

21.

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

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