$\qquad$ Period: $\qquad$ Date: $\qquad$

## Assignment 2.5 - Compare Linear \& Exponential Functions

Identify whether situation "a" or situation " $b$ " has a greater rate of change. Also, identify situation "a" and "b" as either linear or exponential.

1. a.

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

b.

2. 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.
$\qquad$
3. a.

$$
y=2(5)^{x}
$$

$\qquad$
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


Refresh your memory:
Graph the equations below.
5. $y=\frac{3}{4} x-5$


Write an equation from two points.
7. Exponential Equation
$(2,50)(3,10)$
Type:

Common ratio:
$y$-intercept:
6. $y=-4(x+2)+3$

8. Linear Equation
$(-3,9)(-8,11)$
Slope:

Point-Slope Form:

Slope-Intercept Form:

Equation:

