

Write the equation of the following linear function:

x	y
2	-6
3	-10
4	-14
5	-18
6	-22
7	-26

Handwritten annotations: A red horizontal line is drawn above the table with an asterisk above '0' and '2'. A red vertical line is drawn to the right of the table with an asterisk above '2'. A red bracket on the left side of the table spans from the first row to the last row. A red bracket on the right side of the table spans from the first row to the last row, with a '-4' written next to it. The values 2 and -6 in the first row are circled in purple.

$$y = mx + b$$

$$m = \frac{\Delta y}{\Delta x} = \frac{-4}{1} = -4$$

$$b = 2$$

$$y = -4x + 2$$

$$y = -4x + b$$

$$-6 = -4(2) + b$$

$$-6 = -8 + b$$

$$+8 \quad +8$$

$$2 = b$$

Write the equation of the following Quadratic function in vertex form:

$$\star y = a(x - \overset{-3}{h})^2 + k \star$$

vertex: (h, k)

X	Y
-6	28
-5	18
-4	12
<u>-3</u>	<u>10</u>
\star -2	12 \star
-1	18
0	28

$$y = a(x + 3)^2 + 10$$

$$12 = a(-2 + 3)^2 + 10$$

$$12 = a(1)^2 + 10$$

$$12 = a + 10$$

$$-10 \quad -10$$

$$a = 2$$

$$y = 2(x + 3)^2 + 10$$

Write the equation of the following exponential function:

x	y
-2	5/9
-1	5/3
0	5
1	15
2	45
3	135

$$y = ab^x$$

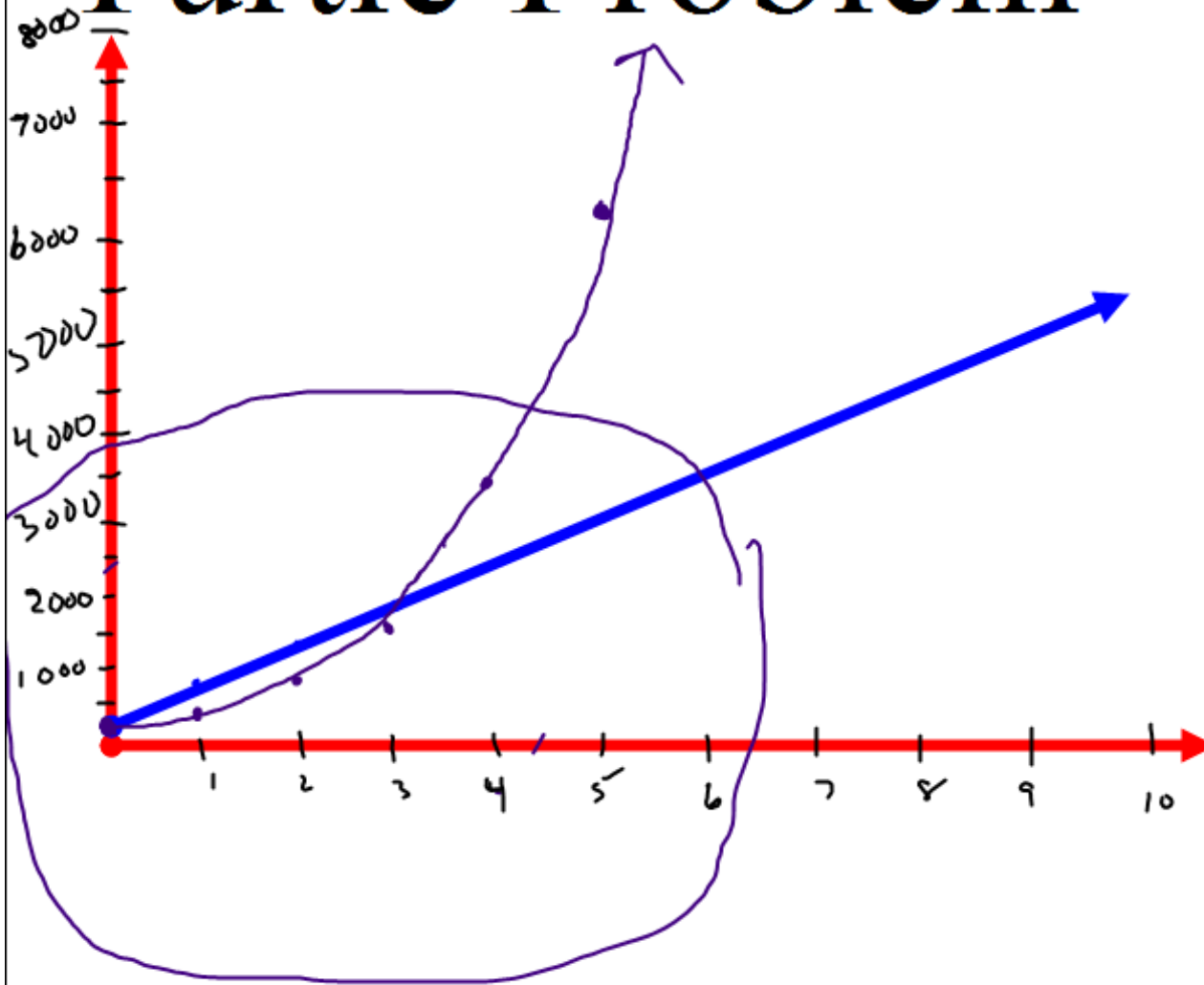
Handwritten annotations for the equation $y = ab^x$:

- An arrow points from the a to the text "y-int (5)".
- An arrow points from the b to the text "rate of mult. (3)".

$$y = 5(3)^x$$

$$a_n = 15(3)^{n-1}$$

Turtle Problem



Veterans

Northside

Linear, Exponential or Neither?