

Review - Writing Linear Equations

<p>Next/Now Statements</p> <p>These patterns are called <i>recursive</i>. The rule for the Next item relies on what you got for the Now item.</p> <p>THESE ARE NOT FUNCTION RULES - they only work if you KNOW both the Next and the Now.</p>	<p>Function Rules</p> <p>These patterns follow rules that work for ANY input, regardless of where you are in the pattern.</p> <p>You can plug in ANY input, follow the rule, and get the correct output.</p>												
<p>Ex. 1 -3, 9, -27, 81, -243</p> <p>$-3 \cdot -3$</p> <p>a. Next = Now \cdot -3 b. Next = Now \cdot 3 c. Next = Now + 12 d. Next = Now + 6</p>	<p>Ex. 2 Which expression is the output of nth term?</p> <table border="1"> <tr> <th>Input</th> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>n</td> </tr> <tr> <th>Output</th> <td>5</td> <td>8</td> <td>11</td> <td>14</td> <td></td> </tr> </table> <p>$+3 \quad +3 \quad \frac{\Delta y}{\Delta x} = \frac{3}{1}$</p> <p>a. $n + 3$ b. $n + 17$ c. $3n + 2$ d. $3n - 2$</p> <p>$3(1) + 2 = 5$ $3(2) + 2 = 8$</p>	Input	1	2	3	4	n	Output	5	8	11	14	
Input	1	2	3	4	n								
Output	5	8	11	14									
<p>You Try 3 15, 8, 1, -6, -13</p> <p>$-7 \quad -7 \quad -7 \quad -7$</p> <p>a. Next = Now \cdot -7 b. Next = Now \cdot 7 c. Next = Now - 7 d. Next = Now + 7</p>	<p>You Try 4 Which expression is the output of nth term?</p> <table border="1"> <tr> <th>Input</th> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>n</td> </tr> <tr> <th>Output</th> <td>3</td> <td>1</td> <td>-1</td> <td>-3</td> <td></td> </tr> </table> <p>$-2 \quad -2 \quad \frac{\Delta y}{\Delta x} = \frac{-2}{1}$</p> <p>a. $n - 2$ b. $n - 5$ c. $2n - 5$ d. $-2n + 5$</p> <p>$-2(1) + 5 = 3$ $-2(2) + 5 = 1$</p>	Input	1	2	3	4	n	Output	3	1	-1	-3	
Input	1	2	3	4	n								
Output	3	1	-1	-3									

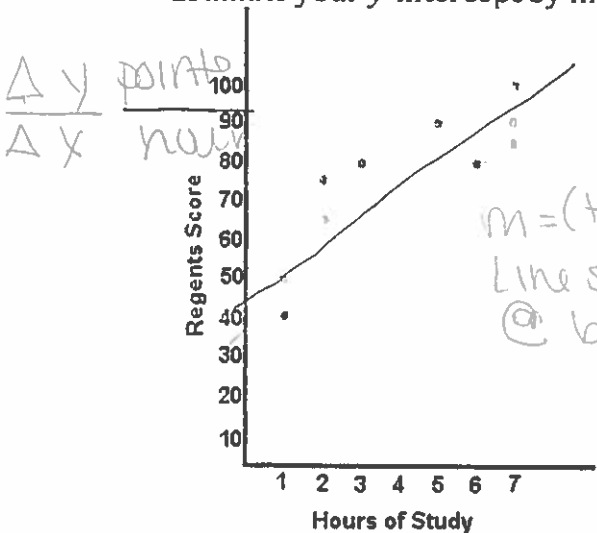
Scatterplots

ALWAYS sketch a trend line first.

- Estimate your slope using $\frac{\text{rise}}{\text{run}}$
- Estimate your y-intercept by finding where the line intersects the y-axis

Increasing (+)
 decreasing (-)

Intersect the y-axis



Which equation could represent the line of best fit?

- a. $y = -7.5x + 30$ → the slope is negative
- b. $y = -7.5x + 45$ → the slope is negative
- c. $y = 7.5x + 30$ → y-inter too low
- d. $y = 7.5x + 45$ → the slope is positive and starts at 45.

$m = (+)$ goes up
 Line starts @ $b = 45$

Write a sentence describing this relationship.

Every hour, you get 7.5 points higher

Don't forget! Your slope (m) is the rate of change and your y-intercept (b) is the starting point!