Function Rules Note-taker Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

*Part 1: Block Patterns(NLVM) – Table/Graph/Algebraic Rule for a Function*

Activity 1:

[](javascript:newWin=void(window.open('http://www.studyzone.org/mtestprep/math8/e/coorperimeter6.cfm','newWin','width=600,height=450'))) Fill in the table Create a scatter plot Write a function rule

|  |  |
| --- | --- |
| x | y |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
|  |  |

How do you know it is correct?

Activity

Activity 2:

Fill in the table Create a scatter plot Write a function rule

[](javascript:newWin=void(window.open('http://www.studyzone.org/mtestprep/math8/e/coorperimeter6.cfm','newWin','width=600,height=450')))

|  |  |
| --- | --- |
| x | y |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |
|  |  |

How do you know it is correct?

*Part 2: Algebraic Rules for Functions*

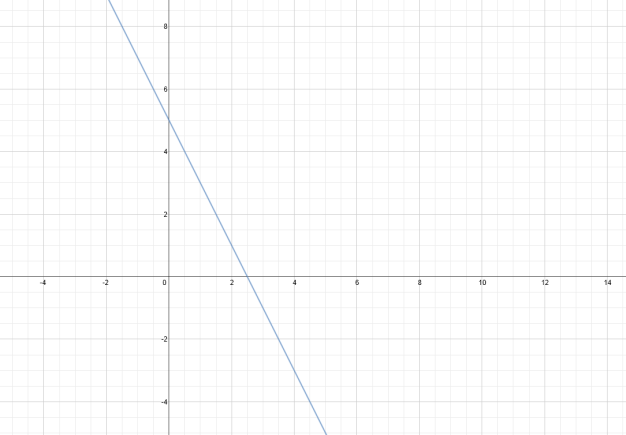
|  |  |
| --- | --- |
| I noticed… | I noticed… |
| I wonder… | I wonder… |
| Summary of writing an algebraic rule/ Things I need to know | |

Linear Functions (arithmetic patterns)

Algebraically

Numerically

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| X | -2 | -1 | 0 | 1 | 2 | 3 | 4 |
| f(x) | 9 | 7 | 5 | 3 | 1 | -1 | -3 |

[](https://s3.amazonaws.com/grapher/exports/9rsfinfju7.png)Graphically

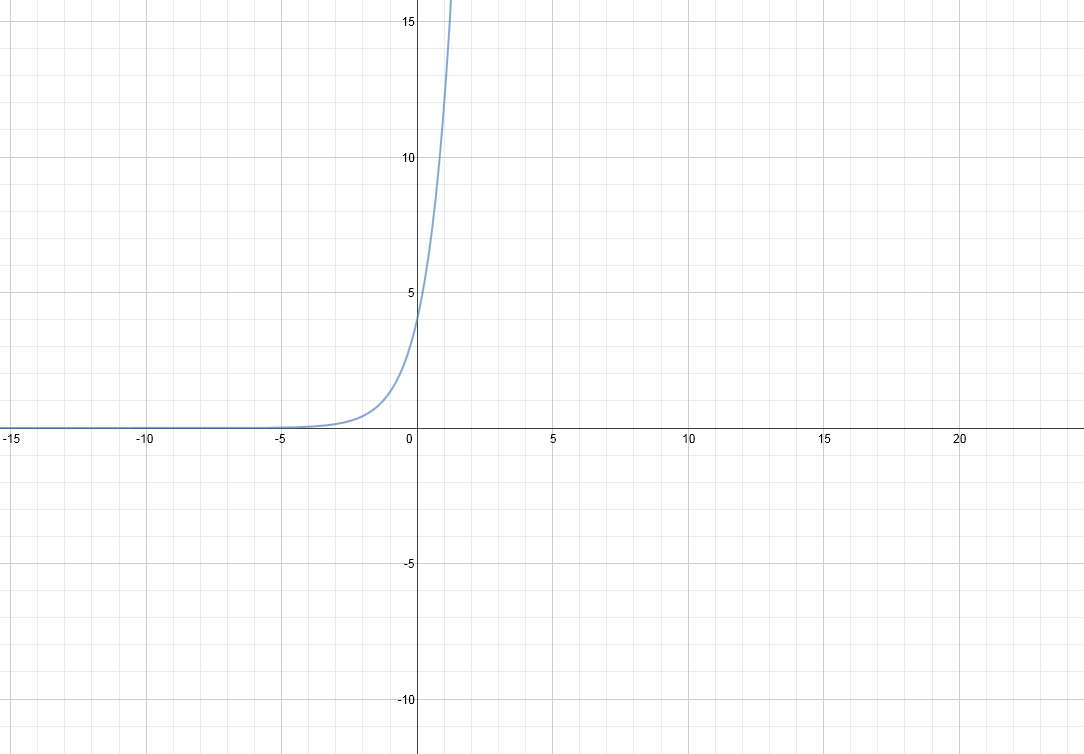
Exponential Functions (geometric patterns)

|  |  |
| --- | --- |
| I noticed… | I noticed… |
| I wonder… | I wonder… |
| Summary of writing an algebraic rule/ Things I need to know | |

Algebraically

Numerically

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| X | -2 | -1 | 0 | 1 | 2 | 3 | 4 |
| f(x) | 4/9 | 4/3 | 4 | 12 | 36 | 144 | 324 |

[](https://s3.amazonaws.com/grapher/exports/ysgay6v5ih.png)Graphically

Quadratics Functions

|  |  |
| --- | --- |
| I noticed… | I noticed… |
| I wonder… | I wonder… |
| Summary of things I need to know | |

Algebraically

Numerically

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| X | 0 | 1 | 2 | 3 | 4 | 5 |
| f(x) | 3 | 4 | 7 | 12 | 19 | 28 |
|  |  |  |  |  |  |  |

[](https://s3.amazonaws.com/grapher/exports/0wejbs3fne.png)Graphically