**What are Expressions?**  Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per \_\_\_\_\_\_

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Expression X   |  |  | | --- | --- | | x-value | answer | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  |   Table  What is the pattern? | Expression 2x   |  |  | | --- | --- | | x-value | result | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  |   What is the pattern? | Expression 2x+5   |  |  | | --- | --- | | x-value | Expression  value | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  |   What is the pattern? |
| Expression -X   |  |  | | --- | --- | | Input | Output | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | | Expression -2X + 5   |  |  | | --- | --- | | Input | Output | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | | Expression x2   |  |  | | --- | --- | | x-value | output | |  |  | |  |  | |  |  | |  |  | |  |  | |  |  | |
| What is the Pattern? |  |  |
| In your own words what are expressions?  Why do we use a table of values? | | |

Use a graphing calculator.

**Graphical Representation**  Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Per \_\_\_\_\_\_

Note: Set calculator ZOOM to ZFrac1/2.

|  |  |  |
| --- | --- | --- |
| Expression X  Sketch the Graph  Use the Trace key to compare the values to the table of values in pg 1.  What do you notice? | Expression 2x  Sketch the Graph  Use the Trace key to compare the values to the table of values in pg 1.  What do you notice? | Expression 2x+5  Sketch the Graph  Use the Trace key to compare the values to the table of values in pg 1.  What do you notice? |
| Expression -X  Sketch the Graph  Use the Trace key to compare the values to the table of values in pg 1.  What do you notice? | Expression -2X + 5  Sketch the Graph  Use the Trace key to compare the values to the table of values in pg 1.  What do you notice? | Expression x2  Sketch the Graph  Use the Trace key to compare the values to the table of values in pg 1.  What do you notice? |
| In your own words what is the relationship between the table of values and the corresponding graphs? | | |