***ACTIVITY – Exploring*** 

Examine the entries in the tables below. Determine the pattern to complete the next entries in each table.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Exponent 2** | **Exponent –2**  | **Exponent**  |  | **Exponent 3** | **Exponent –3**  | **Exponent**  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

Compare the entries in the first and second column of each table. Describe the relationship that you see.

Compare the entries in the first and third column. What do you think it means to raise a number to an exponent of ½ or ⅓?



Use your results above to define a formula for

***ACTIVITY – Exploring*** 

Examine the entries in the tables below. Use your calculator to complete each table.

To do a fractional (rational) exponent on your calculator you will need to:

* Use exponent button on your calculator (either the , , or  button)
* Use brackets around the fraction
* For example: Enter  as **25  ( 3 ÷ 2 ) =**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  |  |  |  |  |  |
| 1 | 1 |  |  |  | 1 | 1 |  |  |
| 4 | 2 |  |  |  | 8 | 2 |  |  |
| 9 | 3 |  |  |  | 27 | 3 |  |  |
| 16 | 4 |  |  |  | 64 | 4 |  |  |

Compare the entries in the second, third, and fourth columns of each table.

How do the values of  and  relate to the values of ?

How do the values of  and  relate to the values of ?



Use your results above to define a formula for