Exponential Functions-

A function where the variable (x) is in the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_.

|  |  |  |
| --- | --- | --- |
| Equation | To put it in your calculator… | Graph |
| y = 3x\_\_\_\_\_ is the base of  this equation |  |  |

Get used to the calculator key strokes. Fill in the following table..

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| X | X2 | X3 | X4 | X5 |
| 2 |  |  |  |  |
| 3 |  |  |  |  |
| 4 |  |  |  |  |
| 5 |  |  |  |  |
| 6 |  |  |  |  |

We can use our solving equation skills on exponential equations too!

If the **bases** are the same, here’s what we do…

Ex. 1 Ex. 2

 $3^{x+4}= 3^{12}$ $8^{3x-5}=8^{55}$

**The Hidden Base**

Match the answer with the corresponding base by finding the power the base is raised to.

|  |  |  |  |
| --- | --- | --- | --- |
| **Base 2 (or** $2^{x}$**)** | **Base 3 (or** $3^{x}$**)** | **Base 4 (or** $4^{x}$**)** | **Base 5 (or** $5^{x}$**)** |
| **4 = \_\_\_\_\_\_** | **64 = \_\_\_\_\_\_** | **9 = \_\_\_\_\_\_** | **125 = 53** |
| **2 = \_\_\_\_\_\_** | **27 = \_\_\_\_\_\_** | **8 = \_\_\_\_\_\_** | **25 = \_\_\_\_\_\_** |
| **81 = \_\_\_\_\_\_** | **625 = \_\_\_\_\_\_** | **260 = \_\_\_\_\_\_** | **16 = \_\_\_\_\_\_** |