|  |  |  |  |
| --- | --- | --- | --- |
| 100 =  |  | Log 101 =  |  |
| 101 =  |  | Log10 10 =  |  |
| 102 =  |  | Log 10100 =  |  |
| 103 =  |  | Log10 1000 =  |  |
| 104 =  |  | Log10 10000 =  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| 40 =  |  | Log4 1 =  |  |
| 41 =  |  | Log4 4=  |  |
| 42 =  |  | Log4 16 =  |  |
| 43 =  |  | Log4 64 =  |  |
| 44 =  |  | Log4 256=  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| $\frac{1}{2}$0 =  |  | $log\_{\frac{1}{2}}$1 =  |  |
| $\frac{1}{2}$-1 =  |  | $log\_{\frac{1}{2}}2 $=  |  |
| $\frac{1}{2}$-2=  |  | $log\_{\frac{1}{2}}$ 4 =  |  |
| $\frac{1}{2}$-3 =  |  | $log\_{\frac{1}{2}}$ 8 =  |  |
| $\frac{1}{2}$-4 =  |  | $log\_{\frac{1}{2}}$ 16 =  |  |

1. Look at the tables above and describe any trends you see.
2. Summarize your thoughts on what you think the “log” button on the calculator does.
3. Look at the second table above and estimate the value of $log\_{4}80$ **WITHOUT USING THE CALCULATOR**.
4. What is the implied question in this expression $ log\_{4}80$?