

On the Subject of Bases

What's on second.

- You will be presented with 2 numbers, an operator between them, and a 0 – 9 number pad.
- The two numbers are not necessarily in base (<https://en.wikipedia.org/wiki/Radix>) (also know as "radix") 10, our standard number base. You will need to figure out what base the numbers are in, and the base may differ between the two numbers. You can convert them (<https://sciencing.com/convert-between-base-number-systems-8442032.html>) back to base 10 if you would like to.
- After figuring out what the answer to the simple math problem is, you must enter that number into the keypad and hit submit. However, your answer may also need to be converted to another base before submission. Entering in the incorrect answer, or the correct answer in the wrong base, will result in a strike.
- Follow the steps below to figure out which base all three numbers are in. If any of the numbers evaluate to ten, use ten. Otherwise, take the number you get module 7, then add two.
- **Note:** Always submit the absolute value of the answer you get, and do not prepend your answer with any zeros, as that is counted as incorrect.

Calculating Bases

First Number:	# Lit indicators + Last # in Serial Number + 3 (if DVI-D port exists)
Second Number:	# UnLit indicators + First # in Serial Number + 6 (if Serial port exists)
Answer:	# Port Plates + 2 (if IND indicator exists)