

Welcome competitors to the 1st Annual Measurement Decathlon! In the next ten events you will have a chance to prove how much you know about measurement. At each station you must determine the Mass, Length, or Volume of the different objects.

1. To determine Mass, Use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and the base unit is \_\_\_\_\_\_\_\_\_\_.
2. To determine Length, Use \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_, and the base unit is \_\_\_\_\_\_\_\_\_\_\_.
3. One way to determine Volume is multiplying \_\_\_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_\_\_\_ x \_\_\_\_\_\_\_\_.
4. Another way to determine Volume is measuring the change between where the water started and where the water moved to after the object was added. That base unit is \_\_\_\_\_\_\_\_\_\_.
5. What is the order of the prefixes from Biggest size to Smallest size?

**\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_**

Are you all stretched out and ready to go?

Once you are ready to go, flip over the paper and get started. Make sure you visit each of the 10 stations. You do not need to go in any order, but you need to make sure you visit every station by the time you are done. If one station is full, find your way to an open one.

You are turning this paper in to me at the end of the hour. Which means that you should be working efficiently all period.

If you need any help, ask me!!!



**As you go through the events, make sure your amounts have the correct Units!**

|  |  |  |  |
| --- | --- | --- | --- |
| **Event #** | **Your Measured Amount****(include units)** | **Actual Amount****(include units)** | **Percent Error (%Error)****http://www.learningaboutelectronics.com/images/percent-error-formula.png** |
| **Event 1****(Mass of Blue Thing)** |  |  |  |
| **Event 2****(Mass of Holder Thing)** |  |  |  |
| **Event 3****(Mass of Container Thing)** |  |  |  |
| **Event 4****(Length of Colored Stick Things)** |  |  |  |
| **Event 5****(Length of Paper Clip)** |  |  |  |
| **Event 6****(Volume of Element Block)** | **L = \_\_\_\_\_\_\_****W = \_\_\_\_\_\_\_****H = \_\_\_\_\_\_\_\_****Total = \_\_\_\_\_\_\_\_\_** | **L = \_\_\_\_\_\_\_****W = \_\_\_\_\_\_\_****H = \_\_\_\_\_\_\_\_****Total = \_\_\_\_\_\_\_\_\_** | *\*only do percent error for the* ***TOTAL****, not L, W, or H* |
| **Event 7****(Volume of Box of Tape)** | **L = \_\_\_\_\_\_\_****W = \_\_\_\_\_\_\_****H = \_\_\_\_\_\_\_\_****Total = \_\_\_\_\_\_\_\_\_** | **L = \_\_\_\_\_\_\_****W = \_\_\_\_\_\_\_****H = \_\_\_\_\_\_\_\_****Total = \_\_\_\_\_\_\_\_\_** | *\*only do percent error for the* ***TOTAL****, not L, W, or H* |
| **Event 8****(Height of lab bench from floor to top of the lip.** |  |  |  |
| **Event 9****(Amount of water in Graduated Cylinder)** |  |  |  |
| **Event 10****(Amount of water in Large Beaker)** |  |  |  |

**Average Percent Error (Add up all 10 % errors and divide by 10) = \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**