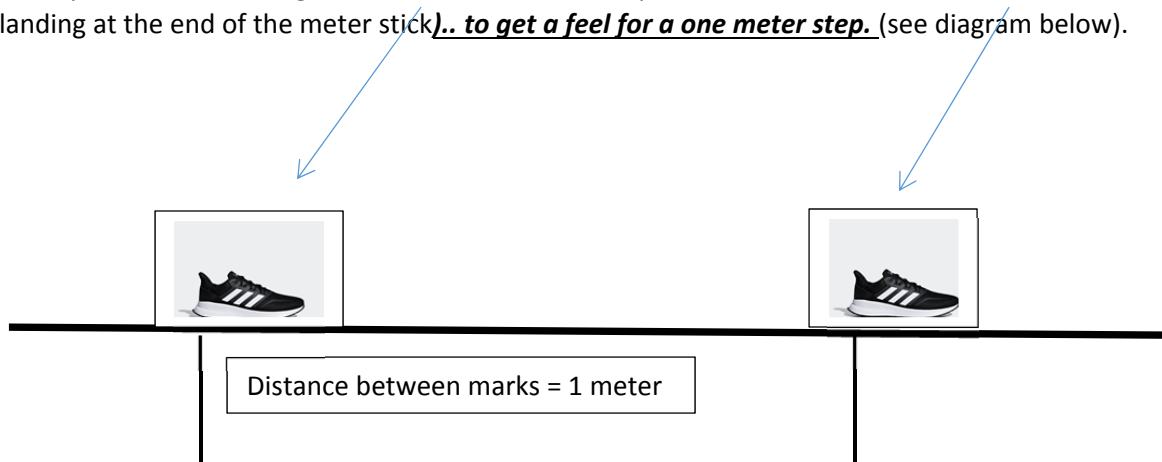


Mini-lab: Calibrating your 'big step' tool, *Covid style!*

1. Locate some open space, at least 30 feet across.. (your yard? The sidewalk? The line at the grocery store?)
2. Bring a tape measure (ideally a meter stick) and measure out one (1) meter (using chalk? A couple of pencils? Some blue, painters tape?).. note: 1 meter equals 39.37 inches.. = 1 yard + 4inches.
3. Place your heel at the edge of the first mark. Then step out to the one-meter mark (with the other heel landing at the end of the meter stick).. **to get a feel for a one meter step.** (see diagram below).



4. Note: this ability to take a 'big step' roughly equal to one meter.. IS YOUR BAD TOOL!.
5. **Take five, successive big steps**, attempting to mark out five, consecutive meter distances. Each time you take a big step.. drop a marker (place some tape, lay a pencil down, etc. Feel free to have your kid sister help you).
6. **Using a real measuring tape (?) or meter stick (?) or your shoe/steps, assuming you know how many inches your shoe is long..** Measure the length of each of those five steps in Meters

Distance(d) 1 =	_____	meters
d2 =	_____	m
d3 =	_____	m
d4 =	_____	m
d5 =	_____	m

If measuring in inches (or feet).. 2.54 cm = 1 inch. See DigitalDutch.com unit converter

7. **Determine the range of uncertainty**..(what was the **largest error** in cm? Write down and label all values).

8. **Determine the percent uncertainty**.. of your big-step tool. (see page 6 in the text for a definition).

9. **Pace off ten meters** using the patented 'big step' technique, marking where you started and where you ended. Then, using meter stick or tape measure or some other means of measuring accurately) measure out the true distance you covered in (convert to) meters.

10. In the space below, draw a diagram illustrating (and comparing) your TRUE DISTANCE with your BIG STEP MEASURED distance.. (which is also supposed to be 10 meters).

Now: Consider your determination of %uncertainty from step 8. Using your same BIG STEP tool, draw two 'boundary line' above and below your measurement of 10 meters which are equal to your uncertainty.

On your diagram, draw two lines which represent your 'uncertainty boundaries'.

Last step.. DOES THE TRUE MEASURE OF 10 METERS lie WITHIN THOSE BOUNDS?

If so.. YOUR ARE A ROCK STAR! Your 'tool' worked exactly as expected!

If not.. well.. what went wrong? (*Explanations must be in the form of rhymes*).

Analysis _____

In this space, write a short journal style entry describing how you entered new levels of consciousness while doing this activity.