# Roles

* The **counter** is responsible for counting and placing the dried beans into the cup.
* The **recorder** is to verify the count after the noodle breaks and record the data.
* The **catcher** is responsible for placing hands under the cup to catch the container with beans (otherwise, they will be all over the floor and difficult to find/count).

# Gather the Following Materials

* Tape
* Permanent Marker
* Ruler
* 5 Dry Spaghetti Noodles
* 1 Piece of String
* 1 Plastic Cup Almost Full of Dried Beans

**Step 1:** Measuring from left to right, use the marker to mark all 5 pasta noodles at 1 inch, 2 inches, 3 inches, 4 inches, 5 inches, and 8 inches.

**Step 2:** Tape the string to the plastic cup so that it is like a bucket with a handle. Depending on the length of string, consider tying the string into a circle, taping the knot to the bottom of the cup, then along the sides of the cup.

**Step 3:** Tape the pasta to the edge of the table such that the edge of the table is at the 8 in. mark of your pasta noodle, and the other markings on the pasta are hanging over the edge of the table.

**Step 4:** Place tape on the 1-in. marker so that it will prevent the cup and string from sliding off the spaghetti noodle and hang the cup at the 1-in. marker.

**Step 5:** Start slowly adding beans to the cup, one at a time, until the pasta noodle breaks. Record your results in the following table.

|  | x | y |
| --- | --- | --- |
| Marker | **Length (in.) from Table (8” Marker)** | **Number of Beans** |
| 1-inch |  |  |
| 2-inch |  |  |
| 3-inch |  |  |
| 4-inch |  |  |
| 5-inch |  |  |

**Step 6:** Repeat steps 3-5 for the remaining markers.