

# Cardboard Backboard Statistics Data Sheet



Mark a spot directly in front of your backboard roughly three big steps away from the hoop. This will be your “free-throw” spot. Next, find a small ball or a balled-up sock to use as your tiny basketball. With your ball, take five shots from the “free-throw” spot and record the number of successful shots.

____ / 5
How many shots did you make?

Take five more shots and record the number of successful shots.

____ / 5
How many shots did you make?

Do this three more times: take five more shots and record the number of successful shots.

____ / 5	____ / 5	____ / 5
How many shots did you make?	How many shots did you make?	How many shots did you make?

The numbers you recorded are **data**. Data is information we can organize and study. When we collect multiple points of data, we create a **data set**. Your number of successful shots make up a data set. List the five numbers of successful shots in a list:

\_\_\_\_ , \_\_\_\_ , \_\_\_\_ , \_\_\_\_ , \_\_\_\_ (example: 3, 4, 3, 5, 2)

Since you have collected this information, you can now analyze this data. Collecting and analyzing data is the study of **statistics**.

Let’s start by putting all of the numbers from your data set in order from smallest to largest:

\_\_\_\_ , \_\_\_\_ , \_\_\_\_ , \_\_\_\_ , \_\_\_\_ (example: 2, 3, 3, 4, 5)



**Additional Data:**

In order to graph this data, you'll want to collect a few more pieces of data. Shoot five more sets of five shots and record your results here:

Results from first five sets of five shots (ex. 3, 4, 3, 5, 2):  _____ , _____ , _____ , _____ , _____				
____ / 5	____ / 5	____ / 5	____ / 5	____ / 5
How many shots did you make?	How many shots did you make?	How many shots did you make?	How many shots did you make?	How many shots did you make?
Results from all ten sets of five shots (ex. 3, 4, 3, 5, 2, 4, 3, 0, 2, 2):  _____ , _____ , _____ , _____ , _____ , _____ , _____ , _____ , _____ , _____				

**Frequency Tables:**

With this new additional data, you can create a **Frequency Table**. This is a method of representing data as a table of potential outcomes. For example, the data set (3, 4, 3, 5, 2, 4, 3, 0, 2, 2) would be expressed as the following frequency table:

Example Data:

Possible Outcome of 5 shots	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Times possible outcome occurred	I	-	III	III	II	I

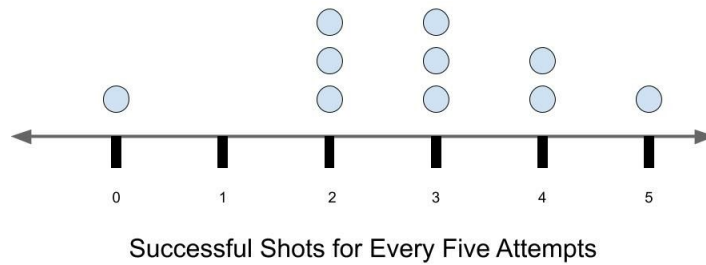
Your Data:

Possible Outcomes	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
Occurrences						

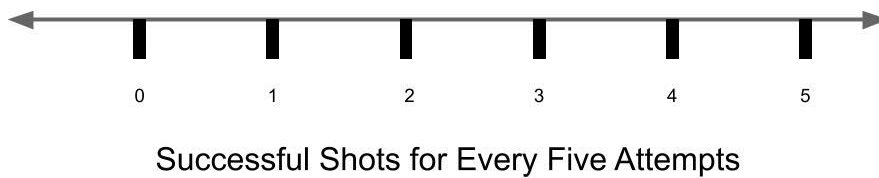
### Make a Dot Plot

Transfer the data from your Frequency Table to the final graph, a **Dot Plot**. This graph uses circles to represent frequency of outcomes, similar to another type of graph called a histogram.

Example Dot Plot:



Your Dot Plot:



Share what you made with your family, classmates, or teachers!