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**Eureka Math Tips for Parents**

Grade 6 • Module 6

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| **Statistics and Probability** In this module, students will move from simply representing data into analysis of data. Students will begin to think and reason statistically, first by recognizing a statistical question as one that can be answered by collecting data. Students will learn that the data collected to answer a statistical question has a distribution that is often summarized in terms of center, variability, and shape. Students will also see and represent data distributions using dot plots, histograms, and box plots.  | **Grade Level Standards**6.SP.1, 6.SP.2, 6.SP.3, 6.SP.4,6.SP.5**Student Report Card**Understands statistical variability and distributions. |

**Key Vocabulary**

* **Median -** The middle number in a sorted list of numbers. To find the Median, place the numbers you are given in value order and find the middle number.
* **Mean** – The average of a set of numbers. To find the Mean, add up all the numbers and divide by how many numbers there are.
* **Dot Plot -** A graphical display of data using dots.
* **Histogram -** A graphical display where the data is grouped into ranges (such as "40 to 49", "50 to 59", etc), and then plotted as bars.
* **Box Plot** - A diagram using a number line to show the distribution of a set of data. The diagram displays the median, quartiles and the minimum and maximum values of data.
* **Variability** – Occurs when the observations in the data set are not he same.
* **Deviations from the Mean** – Difference calculated by subtracting the mean from a value in the data set.
* **Mean Absolute Deviation (MAD) –** The average of the absolute value of the deviations from the mean. (Lessons 9-11)
* **Interquartile Range (IQR)** – a measure of variability for data that is skewed. It is the difference between the upper quartile and lower quartile of a data set and describes how spread out the middle 50% of the data is.

**How you can help at home:**

* Every day, ask your child what they learned in school and ask them to show you an example.
* Ask your child to create a data set that represents a symmetrical distribution. One possible solution is below: Symmetrical Data Set: {-2,-2,-1,0,1,2,2)
* Ask your child to explain the measures of center for each graph on the back of the newsletter and have them explain how they determined the centers.

**Models and Representations**

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| **Symmetrical Data** | **Skewed Data** |
| **Dot Plot** | **Frequency Table** |
| **Box Plot** | **Histogram** |
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