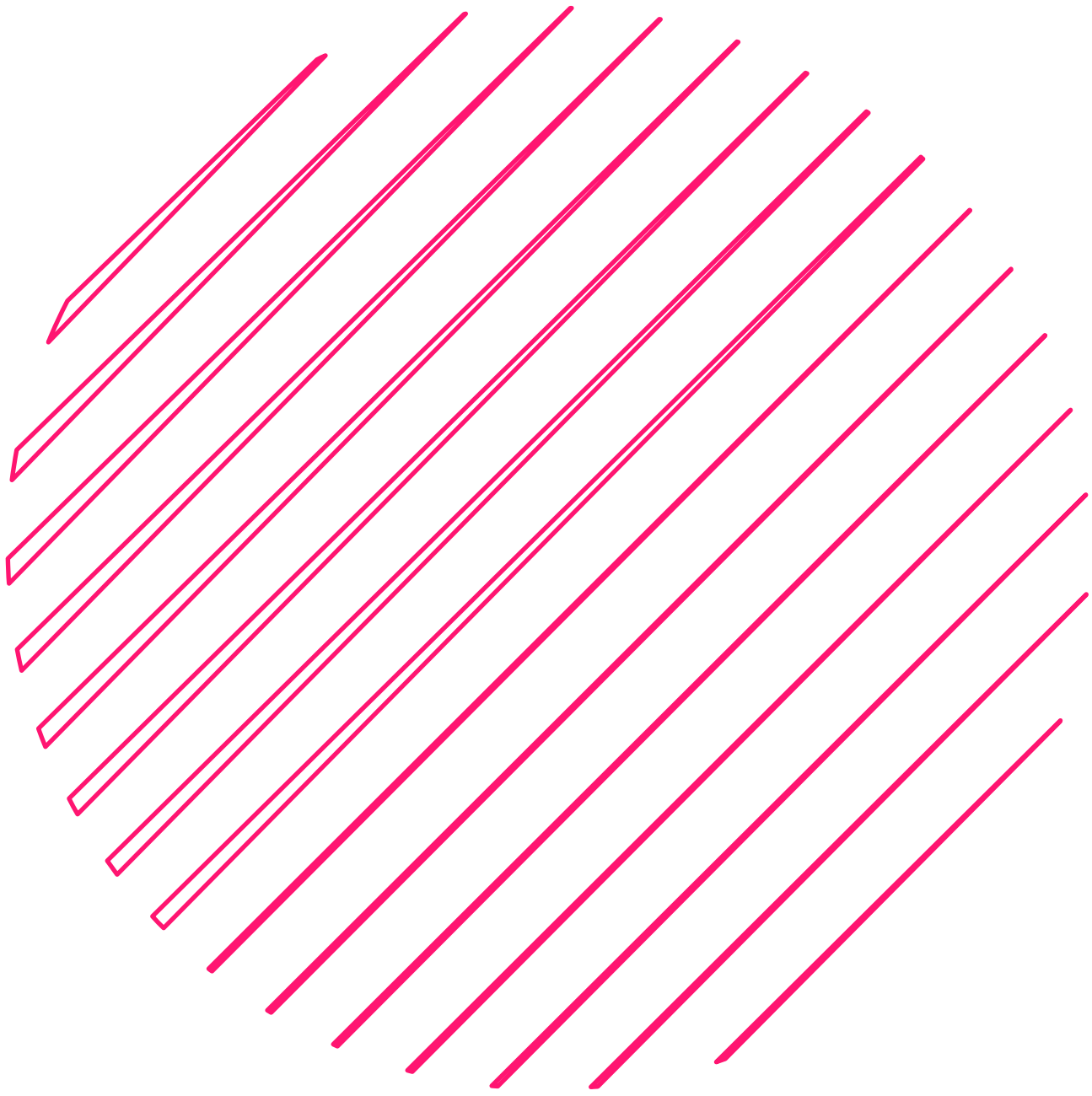
VITAL MATHEMATICS



STATISTICS
MEDIAN

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INTRODUCTION

The median is the middle data value, when all data values are ordered from least to greatest.

- If the sample / population size is odd, the median will be located in the middle
- If the sample / population size is even, there will be two numbers in the middle. Add the two numbers together, then divide by 2. The final answer is the median.

SOLVING MEDIAN

STEP 1) Organize from least to greatest

STEP 2) Eliminate outside data values until the middle data value(s) are identified

Example) ~~1, 2~~, 3, ~~4, 5~~ (Odd data size)

Example) ~~1, 2,~~ 3, 4, ~~5, 6~~ (Even data value)

$$\frac{3+4}{2} = \frac{7}{2} = 3.5$$

MEDIAN EXAMPLE

Example 1: Find the median speed of the following cars below:

0mph, 25mph, 70mph, 40mph, 40mph, 63 mph, 89mph, 126mph

Example 2) Find the median age of the following people listed below:

17yrs, 25yrs, 19yrs, 36yrs, 55yrs, 22yrs, 45yrs, 11yrs, 47yrs

Concepts Concerning the Median

Measure of Center
The median is within the category of measuring the center of a set of data. The other two being the mode and mean, most notably used. The median is a good measure of center because the median does focus entirely on the center. The median will be a value that is near the center.

Outliers
An outlier within the data does not changes the median.

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