MEASURES OF THE SPREAD OF DISTRIBUTION: range, SD, variance

RANGE: The simplest measure of the spread of a list of numbers is the range. The range is defined as the difference between the lowest and highest values.

Puzzle #1: Find the range of this list of numbers: **0, 1, 2, 3, 4, 5, 6**

| Python: | ```# Finds the range of a column:
df['ColumnName'].max() - df['ColumnName'].min()``` |

STANDARD DEVIATION (also called the SD): The standard deviation measures the spread around the average. A low SD means that most of the numbers are very close to the average. A high SD means that the numbers are spread out.

VARIANCE: The variance is the standard deviation squared.

SYMBOLS:

Example: Find the SD and variance of this list: **0, 1, 2, 3, 4, 5, 6**

| Python: | ```# Finds the standard deviation of a column:
df['ColumnName'].std()

Finds the variance of a column:
df['ColumnName'].var()``` |