Notes: Friday January 11, 2013

Mean:

Expected value:

# Mean, Median,Mode

Problems with means: They don’t accurately describe nominal—binary/Bernouli, or ordinal variables

Median: is best use for ordinal variables or when interval ranges are skewed by outliers

Mode: can be used for all variable types, works well with nominal variables

# Variance

Deviation:

Variance:

Standard Deviation:

Standard Deviations are always positive

### Moments

|  |  |  |
| --- | --- | --- |
| Mean | 1st moment |  |
| Variance | 2nd moment |  |
| Skewness | 3rd moment |  |
| Kurtosis | 4th moment |  |

### Symbols:

|  |  |  |
| --- | --- | --- |
|  | **Population** | **Sample** |
| **Mean** |  |  |
| **Standard deviation** |  |  |
|  |  |  |

# Conditional Distribution