

**STAT 110 –  
Chapter 13 Definitions – Part II**

standard score – the number of standard deviations above or below the mean at which an observation is located (also known as z-score.)

standard score =  $\frac{\text{observation} - \text{mean}}{\text{standard deviation}}$

$$Z = \frac{X - \bar{X}}{S}$$

$c$ th percentile – a value such that  $c$  percent of the observations lies below it and the rest lie above it

**observation = mean + (standard score)(standard deviation)     $X = \bar{X} + (Z)(S)$**