

Formula Sheet – Test 2 – SCCC 312A

$$\mu = \sum xP(x), \sigma^2 = \left[\sum x^2P(x) \right] - \mu^2$$

For $X \sim \text{Binomial}(n,p)$:

$$P(x) = \frac{n!}{x!(n-x)!} p^x q^{n-x}, \mu = np, \sigma^2 = npq$$

$$Z = \frac{X - \mu}{\sigma}, X = Z\sigma + \mu$$

$$Z = \frac{\bar{X} - \mu}{\sigma/\sqrt{n}}$$