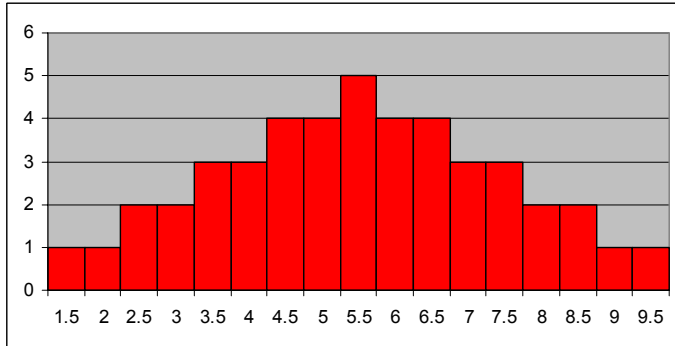
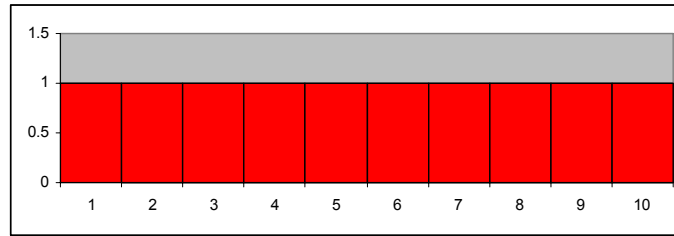


Population vs. Samples

Population / Sample Size = 1

$$\mu = \mu_{\bar{x}} = 5.5$$

$$\sigma^2 = \sigma_{\bar{x}}^2 = 8.25$$

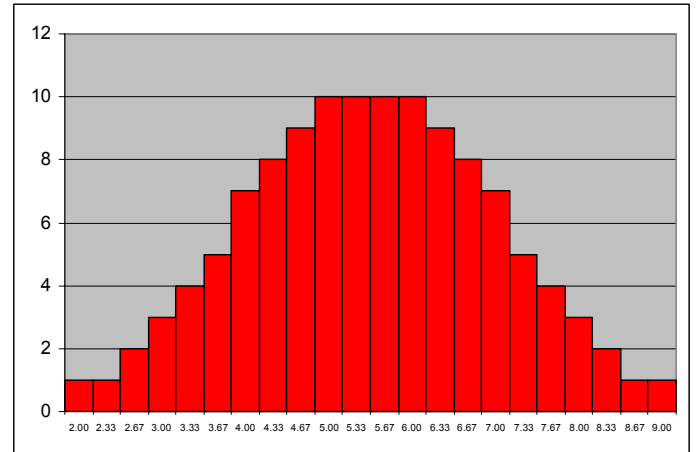


Sample Size = 2

$$\mu_{\bar{x}} = 5.5$$

$$\sigma_{\bar{x}}^2 = \frac{8.25}{2} \left(\frac{10-2}{10-1} \right) = 3.66$$

$$\# \text{ of samples} = {}_{10}C_2 = 45$$

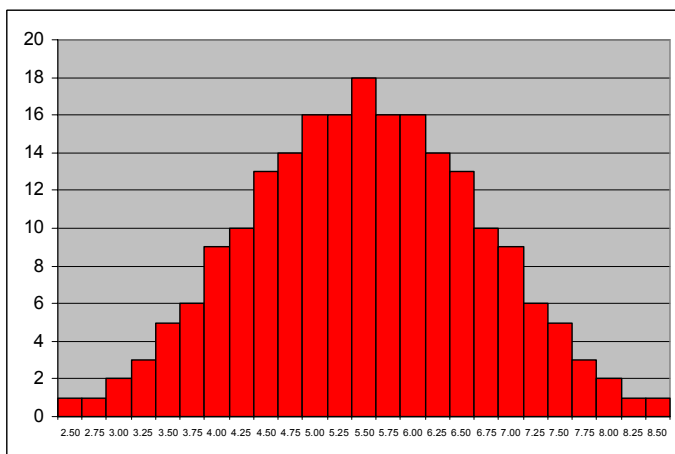


Sample Size = 3

$$\mu_{\bar{x}} = 5.5$$

$$\sigma_{\bar{x}}^2 = \frac{8.25}{3} \left(\frac{10-3}{10-1} \right) = 2.1388$$

$$\# \text{ of samples} = {}_{10}C_3 = 120$$

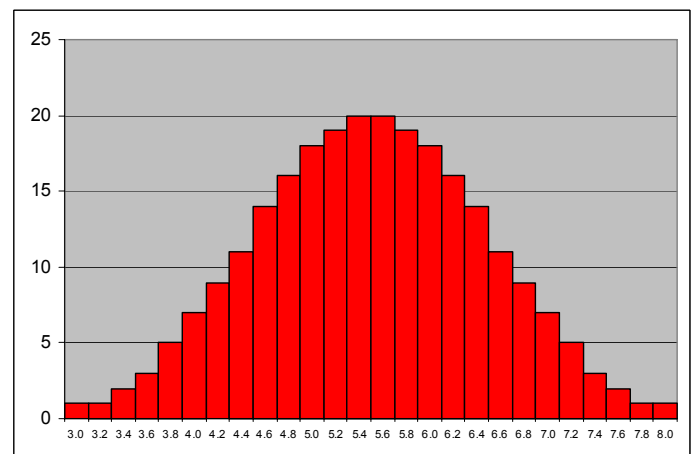


Sample Size = 4

$$\mu_{\bar{x}} = 5.5$$

$$\sigma_{\bar{x}}^2 = \frac{8.25}{4} \left(\frac{10-4}{10-1} \right) = 1.375$$

$$\# \text{ of samples} = {}_{10}C_4 = 210$$



Sample Size = 5

$$\mu_{\bar{x}} = 5.5$$

$$\sigma_{\bar{x}}^2 = \frac{8.25}{5} \left(\frac{10-5}{10-1} \right) = 0.9166$$

$$\# \text{ of samples} = {}_{10}C_5 = 252$$