

Math 1070  
Final Exam

Name : \_\_\_\_\_

**No outside materials allowed except pens or pencils and a calculator. You have all class period to finish the test. Remember to label all graphs, plots, and charts. SHOW ALL WORK.**

Some things you might want to keep in mind :

$$\bar{x} = \frac{1}{n} \sum_{i=1}^n x_i$$

$$z_{x,i} = \frac{x_i - \bar{x}}{s_x}$$

$$a = \bar{y} - b\bar{x}$$

$$\hat{y} = a + bx$$

$$P\{X = k\} = \left( \frac{n!}{k!(n-k)!} \right) p^k (1-p)^{n-k}$$

$$\bar{x} \pm t \left( \frac{s}{\sqrt{n}} \right)$$

$$t_0 = \frac{\bar{x} - \mu_0}{s/\sqrt{n}}$$

$$t_0 = \frac{\bar{x}_1 - \bar{x}_2}{\sqrt{\frac{s_1^2}{n_1} + \frac{s_2^2}{n_2}}}$$

$$s_x = \sqrt{\frac{\sum_{i=1}^n (x_i - \bar{x})^2}{n-1}}$$

$$r = \sum_{i=1}^n z_{x,i} z_{y,i}$$

$$b = r \left( \frac{s_y}{s_x} \right)$$

$$e = y - \hat{y}$$

$$\hat{p} \pm z \sqrt{\frac{\hat{p}(1-\hat{p})}{n}}$$

$$z_0 = \frac{\hat{p} - p_0}{\sqrt{\frac{p_0(1-p_0)}{n}}}$$

$$z_0 = \frac{\hat{p}_1 - \hat{p}_2}{\sqrt{\frac{\hat{p}(1-\hat{p})}{n}}}$$