Math Review/Statistics 104 Pretest Name _____

1. Knowledge of high school algebra is a prerequisite for this course. Without using a calculator, solve the following equations for X.

   a) 3 + 4X = 15

   b) mX + b = Y

   c) $\frac{(X-1)}{2} = 7$

   d) $\frac{(X-a)}{b} = Z$

   e) $\frac{(8-X)}{3} = 4$

   f) $\frac{(12-6Z)}{X} = 3$

   g) $X^2 = 25$

   h) $\sqrt{X} = 4$

2. Familiarity with the use of a calculator will be helpful in this course. Use your calculator to perform the following operations. Leave answers in decimal form.

   a) $\frac{(2+4+1+6+7)}{5} =$

   b) $(2-4)^2 + (4-4)^2 + (1-4)^2 + (6-4)^2 + (7-4)^2 =$

   c) $\sqrt{\frac{26}{4}} =$

   d) $\frac{1}{16} + \frac{1}{20} =$

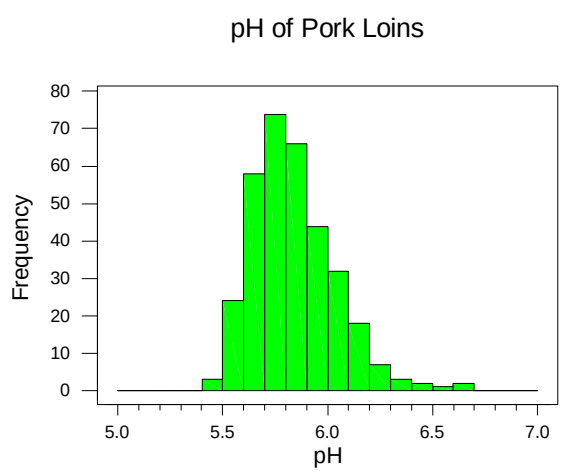
   e) $4 + 2.776\left(\frac{2.55}{\sqrt{5}}\right)$

3. Statistics uses the language of summation notation to build statistical formulas. You will need to learn how to use your calculator to accomplish the calculations indicated by summation notation. Most calculators have built in statistics functions to do the calculations. For this problem, you may work with others who have the same kind of calculator as you.

   Let $x_1 = \mathbf{2}$, $x_2 = \mathbf{4}$, $x_3 = \mathbf{1}$, $x_4 = \mathbf{6}$, $x_5 = \mathbf{7}$

   Use your calculator to find

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

   $$s = \sqrt{\frac{1}{n-1}\left[\sum_{i=1}^{n}(x_i - \bar{x})^2\right]}$$

4. Statistics uses data to help understand the world around you. The pH of pork is very important as higher pH values (especially values greater than 6.0) indicate that pork is more flavorful and tender. Below is a pictorial summary of data on the pH of pork loins. Write a short paragraph describing what the picture tells you about the flavor and tenderness of pork loins.