Name: _____ Math 082 Practice Exam #3

1. Determine if the following variables are Categorical, Quantitative Continuous, or Quantitative Discrete. (2 pts each)

a. Months people were born in _____

b. Number of tests you have this week _____

c. Time it takes to get to work in minutes _____

d. Eye Color _____

2. Name two graphs you could use to display categorical data. (3 pts)

2. A group of students recorded the colors of cars in a parking lot. Their results are show below.

_____

_____

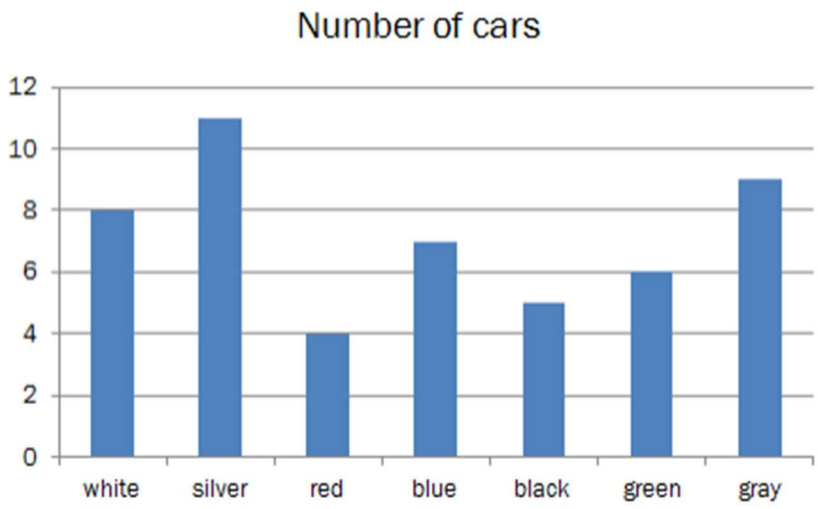
_____

_____

_____

_____

_____



a. What is the relative frequency for each category? (You can fill in the lines next to the graph) (5 pts.)

b. What percentage of the cars were white? (3 pts)

3) Kyle and Ryan take entrance exams at two different universities. Kyle scores a 499 on an exam with a mean of 395 and a standard deviation of 71, while Ryan scores a 39 on an exam with a mean of 32 and a standard deviation of 2.5. Which do you think is more likely to be accepted at the university of his choice and why? (6 points)

4) The following are the ages of five dogs in a recent study. 15, 10, 5, 7, 13

a. Find the mean. (3 pts)

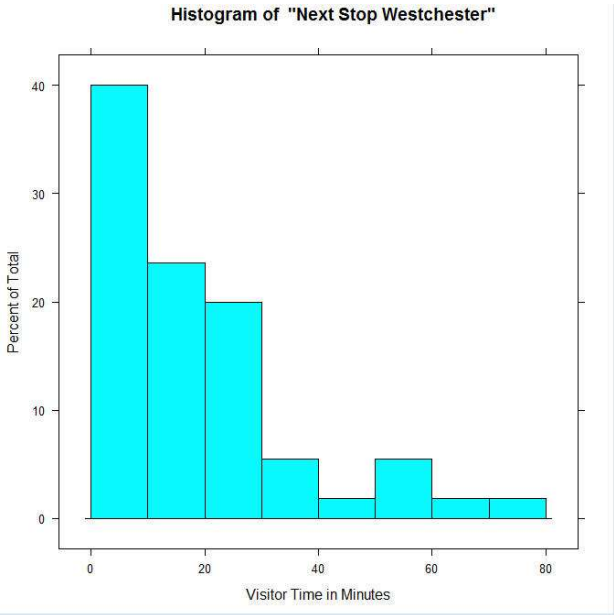
b. Find the Standard Deviation. (4 pts)

5) Kate met with her son's Math class teacher at parent conferences. The teacher told Kate that her son got 78, 89, 63, and 82 on his first four tests.

a. Find the median of his test scores (3 pts)

b. Find the range of his test scores (2 pts)

6) Given the distribution below, state the shape of the histogram (skewed left, skewed right or symmetric), then state how the mean compares to the median. (6 pts)



7) Compute the <u>5-Number Summary</u>, <u>IQR</u>, <u>Mean</u>, and then use the statistics you calculated to <u>describe the shape of the distribution</u> for the set of values below: (10 pts.)

{1, 2, 4, 8, 12, 14, 18, 22, 26, 30}

8) The tallest living man has a height of 98 inches. The tallest living woman is 84 inches tall. Heights of men have a mean of 69 inches and a standard deviation of 3 inches. Heights of women have a mean of 64 inches and a standard deviation of 2.5 inches. Relative to the population of the same gender, find who is taller. (5 pts)

- Explain what the Z-Score for the tallest man is telling us. (2 pts)

FORMULAS

Mean: $\sum \frac{x_i}{n}$

Standard Deviation: $\sqrt{\frac{\Sigma(x_i - \mu)^2}{n}}$

Z-Score: $\frac{x - mea}{S.D}$

OVERALL SCORE: _____/60 = _____%