

Math 153 - Quiz 4

September 27, 2012

Name key

Score _____

Show all work to receive full credit. Supply explanations when necessary.

A random sample of credit-rating scores is shown below.

~~751, 789, 664, 698, 836, 693, 714, 779, 802, 753, 818, 834~~
 664, 693, 698, 714, 751, 753, 779, 789, 802, 818, 834, 836

1. (2 points) Find the percentile for the score 751.

$$\frac{4}{12} = \frac{1}{3} = 33\frac{1}{3}\%$$

33RD PERCENTILE

2. (2 points) What value is the 75th percentile?

$$75 = 100 \times \frac{L}{12}$$

↓

$$L = 9 \Rightarrow 75^{\text{TH}} \text{ PERCENTILE} = \frac{802 + 818}{2} = \boxed{810}$$

★ OR THE EASY WAY IS TO USE

$$P_{75} = Q_3$$

3. (2 points) Find the quartiles.

$$\text{MEDIAN} = \frac{753 + 779}{2} = \boxed{766}$$

$$Q_3 = \frac{802 + 818}{2} = \boxed{810}$$

$$Q_1 = \frac{698 + 714}{2} = \boxed{706}$$

4. (2 points) Compute the interquartile range.

$$Q_3 - Q_1 = 810 - 706 = \boxed{104}$$

5. (2 points) Sketch the boxplot.

