

Math 153 - Quiz 6

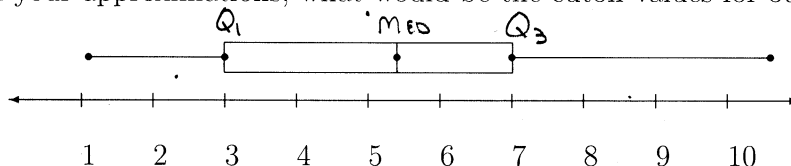
October 6, 2016

Name key

Score _____

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

1. (6 points) The boxplot shown below describes a certain collection of data. Find approximate values for the median, first and third quartiles, and the interquartile range. Based on your approximations, what would be the cutoff values for outliers?



$$Q_1 = 3$$

$$MED = 5.4$$

$$Q_3 = 7$$

$$IQR = 7 - 3 = 4$$

CUTOFFS:

$$3 - 1.5(4) = -3$$

$$7 + 1.5(4) = 13$$

2. (4 points) A letter is selected at random from the word *EYJAFJALLAJOKULL*.

(a) What is the sample space for this experiment?

$$\{E, Y, J, A, F, L, O, K, U\}$$

(b) What is the event of selecting a vowel?

$$\{E, A, O, U\}$$

(c) What is the probability of your event in part (b)?

$$\frac{4}{16}$$

(d) Is your probability in part (c) experimental, theoretical or subjective?

WE ASSUMED EACH ACTUAL LETTER
IS EQUALLY LIKELY.

$$\frac{4 \text{ VOWELS}}{16 \text{ LETTERS}}$$