Math 153 - Quiz 4

February 25, 2016

Name key

Score _____

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

1. (9 points) The following numbers are test scores, shown in no particular order.

$$\cancel{13}\ \cancel{43}\ \cancel{25}\ \cancel{26}\ \cancel{26}\ \cancel{8}\ \cancel{33}\ \cancel{45}\ \cancel{25}$$
$$\cancel{13}\ \cancel{29}\ \cancel{35}\ \cancel{37}\ \cancel{35}\ \cancel{52}\ \cancel{45}\ \cancel{29}\ \cancel{6}$$

Find the quartiles, the interquartile range, and the outlier cutoff values. Then construct the modified boxplot, indicating outliers with asterisks.

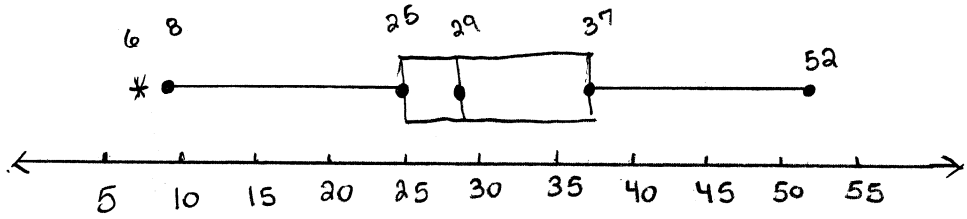
6 8 13 13 25 25 26 26 29 29 33 35 35 37 43 45 45 52

$Q_1 = 25$ MED = 29 $Q_3 = 37$

IQR = 37 - 25 = 12

OUTLIER CUTOFFS : 25 - 1.5(12) = 7
37 + 1.5(12) = 55

6 IS THE ONLY OUTLIER



2. (1 point) Referring to the scores above, at what percentile is the score of 45?

$$\frac{\#\text{ OF VALUES} < 45}{18} = \frac{15}{18} = 0.8\overline{3}$$

$\approx$ 83RD PERCENTILE