

1) Consider the following data set on Spring 2004 Math 580 homework scores.

66.7 76.0 89.7 90.0 94.0 94.0 95.0 95.3 97.0 97.7

a) Find the sample mean \bar{Y} . $= \frac{\sum Y}{n} = \frac{895.4}{10} = \boxed{89.54}$

b) Find the sample standard deviation S . $= \sqrt{\frac{\sum Y_i^2 - n(\bar{Y})^2}{n-1}}$
 $= \sqrt{\frac{81104.36 - 10(89.54)^2}{9}} = \sqrt{103.3604} = \boxed{10.1666}$

c) Find the sample median MED(n).

$\frac{94+94}{2} = 94$

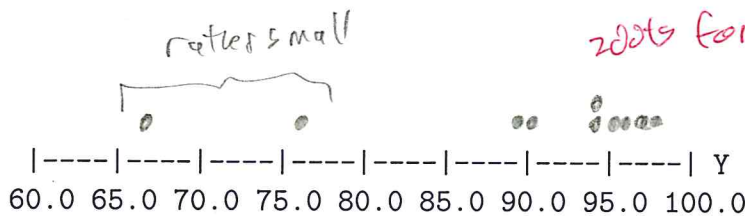
↑
-6

d) Find the sample median absolute deviation MAD(n).

-27.3 -18 -4.3 -4 0 0 1 1.3 3 3.7
 0 0 1 1.3 3 3.7 4 4.3 18 27.3

$MAD(n) = \frac{3+3.7}{2} = \sqrt{3.35}$

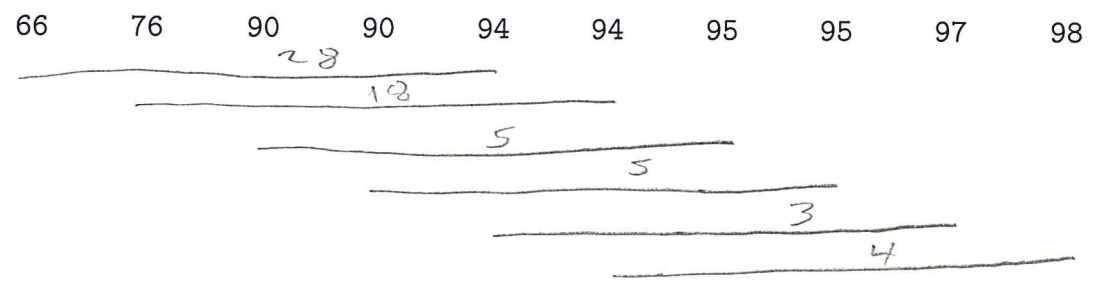
e) Plot the data. Are any observations unusually large or unusually small?



10 dots or -5

80

2) Find shorth(5) for the following data set. Show work.



$$\text{Shorth}(5) = [94, 97]$$

20