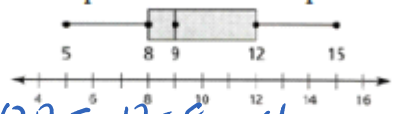
5B STATISTICS page 21-22

5. Algebra 1: Statistics

Assignment

MRS. WILSON

1) What is the **interquartile range** and **range** of the data represented on the plot below?



IQR = 12 - 8 = 4

Range = 15 - 5 = 10

2) How many females do not grocery shop? (27)

	Do you Shop for Groceries at least Once a Week?		
Gender	Yes	No	Total
Male	78	11	89
Female	54	27	81
Total	132	38	170

3) What is the outlier of the following set of data?

–6, 1, 65, –5, 0, -8, –2?

65

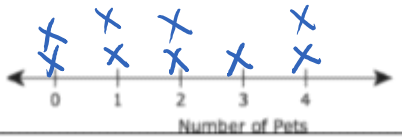
4) The following table shows data on the number of pet students have from four classes.

Use the dot plots below to determine which data set is not Normally Distributed.

DO BCD

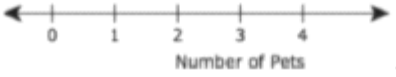
A	0 0 3 2 4 1 4 2 1
B	3 3 3 3 4 2 4 2 1
C	3 5 3 3 4 2 4 2 1
D	0 3 3 1 2 2 4 2 1

A

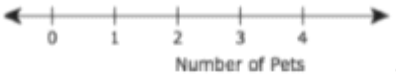


NO

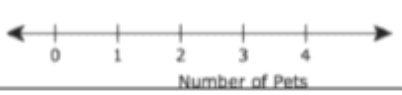
B



C



D



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5) What is the conditional relative frequency that a student's favorite sport is not soccer, *given* that the student is a boy?

	Prefer Soccer	Do not Prefer Soccer	Total
Boys	28	22	50
Girls	17	33	50
Total	45	55	100

A	22% of all boys do not prefer soccer.
B	30% of all boys do not prefer soccer.
C	44% of all boys do not prefer soccer.
D	25.5% of all boys do not prefer soccer.

$\frac{22}{50} \times 100 = 44\%$

6) What is the mean, median and mode of the data set? {–6, –5, 4, 7, 9, 8, 10, 11, 7}?

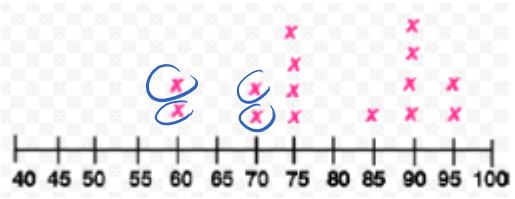
MEAN = $\frac{45}{9}$ = 5

MEDIAN = 7

MODE = 7

7) The dot plot below to answer the question below.

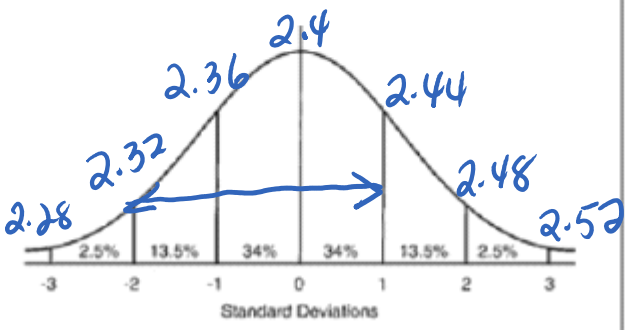
Ralph's test scores



How many times did Ralph earn a score of 70 or less?

2 + 2 = 4 TIMES

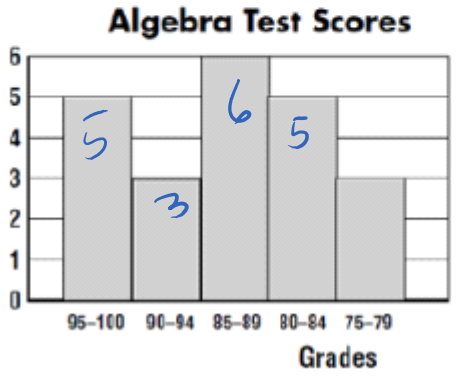
8) The masses (in grams) of pennies are Normally Distributed with a mean of 2.40 g and a standard deviation of 0.04 g.



Find the probability that a penny chosen at random has a mass of 2.32g and 2.44g?

13.5 + 34 + 34 = 81.5 %

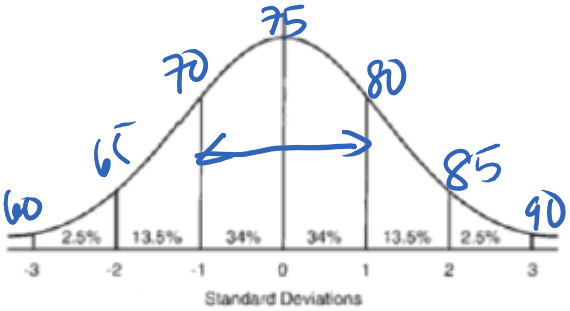
9) Refer to the histogram below.



How many students received a score of 80 or better?

5 + 3 + 6 + 5 = 19 STUDENTS

10) A large group of students took a test in Physics and the final grades have a mean score of 75 and a standard deviation of 5.



If we can approximate the distribution of these grades by a normal distribution, what percent of the students scored between 70 and 80?

34 + 34 = 68 %