HW 10-2
Secondary 3

Name: Selected Answers
Date: _____ Class: _____

In problems 1-3 use the following data to answer the questions.
Height in inches of 14 college baseball players: 70, 69, 72, 70, 68, 71, 70, 69, 71, 70, 67, 69, 71, 73.

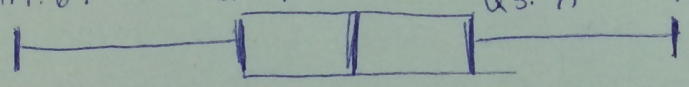
1. Find the standard deviation, and variance

St. Dev: $\sigma = 1.5$ $\sigma^2 = 2.25$

2. Is there an outlier for the following set? Should you use the mean or median to represent this data

3. Find the 5 number summary and construct a box plot for the data.

Min: 67 Q1: 69 Med: 70 Q3: 71 Max: 73



(4 only) Salaries for employees in one department of the Garcia Brothers Company in thousands of dollars: 33.5, 35.3, 33.8, 29.3, 36.7, 32.8, 31.7, 33.5, 28.2, 34.8, 33.5, 29.7, 38.5, 32.7, 348, 34.2, 31.6, 35.4

4. Determine the 5 number summary, range, IQR, and identify any outliers.

Min: 28.2
Q1:
Med: 33.5
Q3:
Max: 38.5

Range: 10.3

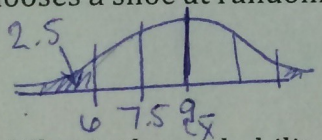
IQR:

Outliers: IQR × 1.5
less than Q1 − (IQR × 1.5)
greater than Q3 + (IQR × 1.5)

(5-7) At a shoe factory, the number of various shoe sizes produced is normally disturbed with a mean of size 9 and a standard deviation of 1.5 sizes.

5. What is the probability that a shoe size will be larger than size 10.5 if a supervisor chooses a shoe at random?

6. What is the probability that a shoe size will be smaller than size 6 if a supervisor chooses a shoe at random?



$2\sigma = 95\%$

$100 - 95\% = 5\%$

$\frac{5\%}{2} = 2.5\%$

↑ 2σ

7. What is the probability that a shoe size will be between sizes 7.5 and 12 if a supervisor chooses a shoe at random?

Use the following data to answer questions 8-11

Year	Mark McGwire Home run totals
86	3
87	49
88	32
89	33
90	39
91	22
92	42
93	9
94	9
95	39
96	52
97	58
98	70
99	65
00	32
01	29

8. Find the standard deviation and variance.

9. State whether the mean or median is a better measure to represent the data and why.

IQR x 1.5 = 52.5

Q1 − 52.5 = −37 ← None less

Q3 + 52.5 = 103 ← None greater

Use Mean b/c No outliers

10. Create a box plot below to represent the data.

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11. State the IQR and if the data is skewed.

IQR: 50.5 − 15.5 = 35

No outliers ⇒ Not skewed