HW 10-2 Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Secondary 3 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
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.

**(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.

**(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?

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 |

1. Find the standard deviation and variance.
2. State whether the mean or median is a better measure to represent the data and why.
3. Create a box plot below to represent the data.
4. State the IQR and if the data is skewed.