



## MATH225

### Week 5 Lab Assignment

**Name: Instructor Name: Professor**

Please use this template to help answer the questions listed in the lab instructions. The “steps” below refer to the steps listed in the lab instructions. Type your answers and post your screenshots in the spaces given below. Then, save this document with your name and submit it inside the course room.

#### Step 1. Gather Data

Your instructors will post 10 data values to use for this lab. The data values represent the HEIGHTS of 10 people from the same population in which you gathered your sample.

Please reach out to your instructor if you did not receive the assigned 10 data values for the term by Monday of Week 5.

(**NOTE:** This is NOT the data used in the lab video, which is about midterm grades. Do not use the midterm grades data.)

**1a.** Gather 10 MORE of your own to add to the 10 provided by your instructor. Do the following: Survey or measure 10 people to find their heights. For the remainder of this lab, treat the 20 numbers as ONE sample.

|                                            |    |    |    |    |    |    |    |    |    |    |
|--------------------------------------------|----|----|----|----|----|----|----|----|----|----|
| <b>Instructor<br/>Provided<br/>Heights</b> | 62 | 62 | 62 | 63 | 65 | 67 | 68 | 69 | 69 | 73 |
| <b>Gathered<br/>Heights</b>                | 59 | 62 | 62 | 65 | 67 | 69 | 69 | 71 | 71 | 72 |

Determine the mean and standard deviation for the **20 values** by using the Week 3 Excel spreadsheet. (Round statistics to two decimals.)

|                                        |         |
|----------------------------------------|---------|
| Mean Height in Inches                  | 66.3500 |
| Sample Standard Deviation<br>in inches | 4.0688  |
| Your Height in Inches                  | 59      |

**1b.** Post a screen shot in the space BELOW of the portion of the Week 3 spreadsheet that helped you determine these values. **Please list the 10 heights your professor provided first followed by the 10 heights you collected. There should be 20 values to determine the mean and sample standard deviation.**

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General

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|    | A | B    | C | D                             | E       | F  | G  | H  | I  | J                            | K | L | M | N | O | P |
|----|---|------|---|-------------------------------|---------|----|----|----|----|------------------------------|---|---|---|---|---|---|
| 4  |   | Data |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 5  |   | 62   |   | Mean                          | 66.3500 |    |    |    |    |                              |   |   |   |   |   |   |
| 6  |   | 62   |   | Median                        | 67.0000 |    |    |    |    |                              |   |   |   |   |   |   |
| 7  |   | 62   |   | Mode                          | 62.0000 | 62 | 62 | 62 | 62 | (Returns more than one mode) |   |   |   |   |   |   |
| 8  |   | 63   |   | Sample Variance               | 16.5553 |    |    |    |    |                              |   |   |   |   |   |   |
| 9  |   | 65   |   | Sample Standard Deviation     | 4.0688  |    |    |    |    |                              |   |   |   |   |   |   |
| 10 |   | 67   |   | Population Variance           | 15.7275 |    |    |    |    |                              |   |   |   |   |   |   |
| 11 |   | 68   |   | Population Standard Deviation | 3.9658  |    |    |    |    |                              |   |   |   |   |   |   |
| 12 |   | 69   |   | Range                         | 14.0000 |    |    |    |    |                              |   |   |   |   |   |   |
| 13 |   | 69   |   | Count (n)                     | 20.0000 |    |    |    |    |                              |   |   |   |   |   |   |
| 14 |   | 73   |   | Min                           | 59.0000 |    |    |    |    |                              |   |   |   |   |   |   |
| 15 |   | 59   |   | Quartile 1                    | 62.0000 |    |    |    |    |                              |   |   |   |   |   |   |
| 16 |   | 62   |   | Median                        | 67.0000 |    |    |    |    |                              |   |   |   |   |   |   |
| 17 |   | 62   |   | Quartile3                     | 69.0000 |    |    |    |    |                              |   |   |   |   |   |   |
| 18 |   | 65   |   | Max                           | 73.0000 |    |    |    |    |                              |   |   |   |   |   |   |
| 19 |   | 67   |   | Interquartile Range (IQR)     | 7.0000  |    |    |    |    |                              |   |   |   |   |   |   |
| 20 |   | 69   |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 21 |   | 69   |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 22 |   | 71   |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 23 |   | 71   |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 24 |   | 72   |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 25 |   |      |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 26 |   |      |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 27 |   |      |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 28 |   |      |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 29 |   |      |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 30 |   |      |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 31 |   |      |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |
| 32 |   |      |   |                               |         |    |    |    |    |                              |   |   |   |   |   |   |

To find boundary for outliers

|           |         |
|-----------|---------|
| 1.5 IQR   | 10.5    |
| Q1-1.5IQR | 51.5000 |
| Q3+1.5IQR | 79.5000 |

Lower boundary

Upper boundary

Identify outliers in your given data set. If the data is not between the lower and upper boundary then it is an outlier

Descriptives