**Evidence Record**

|  |  |  |  |
| --- | --- | --- | --- |
| **Student Name** | **Height (cm)** | **Shoe Length (cm)** | **Stride Length (cm)** |
| **1.**  |  |  |  |
| **2.**  |  |  |  |
| **3.** |  |  |  |
| **4.** |  |  |  |
| **5.** |  |  |  |
| **6.** |  |  |  |

Correlation Value for Stride Length v. Height:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Correlation Value for Shoe Size v. Height:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_



**Graph of Height v. Stride Length-** *Graph your data points AND the linear best fit line from your Logger Pro.*

**Case Analysis:**

1. Based on your correlation values, is a linear fit a good fit for your data? Explain. (Make sure you consider the differences between stride length correlation and shoe size correlation. Remember, the closer your value is to 1 the better!)
2. Based on your data, is there a good correlation for the linear relationship between height and shoe length? Explain.
3. Is there a good correlation for the linear relationship between height and stride length? Explain.
4. Which of the two data sets will be more useful for catching the killer: Shoe length v. height, or Stride length v. height? Explain why you think this.
5. Using the relationship between height and stride length (the best fit line), determine the approximate heights of people with the following stride lengths:
6. 75 cm
7. 45 cm
8. 50 cm
9. Your teacher will now give you the stride length of the crime scene. Use the stride length to determine the height of the killer:

This stride length is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

The height of the killer is:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_