

## Algebra 2

# Student Handout for Identifying Types of Correlation from a Graph and Calculator

Name: \_\_\_\_\_ Date: \_\_\_\_\_

### Objective

Students will identify different types of correlations graphically and by using the linear regression analysis obtained from a TI-83 Plus or TI-84 Plus calculator. Students will also find and know the significance of a correlation coefficient as a result of this lesson.

1. Login to NavNet.
2. Go to the 'Activity Center.'
3. Follow teacher's directions and/or instructions.
4. Plot one point which indicates the approximation of the number of apples and oranges that you eat each year. **Note:** the number of apples will be graphed on the  $x$ -axis and the number of oranges will be graphed on the  $y$ -axis.
5. What kind of correlation is indicated by the scatter plot?  
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\_\_\_\_\_
6. Follow teacher's directions and/or instructions.
7. Stay logged in to NavNet. When the screen reads 'Transfers Complete,' log out of NavNet. Click on STAT and wait for further instructions.
8. Follow teacher's directions and/or instructions.

9. What is the linear regression equation obtained from the data compiled (please, round all decimals to the nearest hundredth)?

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10. What is the  $r$  value? What does it signify?

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11. Find a partner with whom to work. One student will create data lists in L1 and L2 and the other student will create data lists in L3 and L4. The data in L1 and L3 will be the grade levels in a K-12 school with the number 0 representing kindergarten, 1 for first grade, etc. The second lists will correspond to your age at the start of that school year. For instance, if a student was 7 when entering second grade the entry in L1 or L3 would be 2 and the entry in L2 or L4 would be 7.

After compiling this data, connect your calculators and transfer the lists to each other. When this is completed, both students should have L1, L2, L3, and L4.

12. Complete analysis of L1 and L2 including the equation of the line of best fit and the  $r$  value. Round all decimals to two decimal places. Complete an analysis of L3 and L4 similarly.

L1, L2 

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L3, L4 

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13. Login to NavNet. Go to 'Activity Center.' Click 'Send' by pressing 'y='.

14. Follow teacher's directions and/or instructions.
15. Stay logged in to NavNet. When the screen reads 'Transfers Complete,' log out of NavNet. Click on STAT and wait for further instructions.
16. Complete analysis of the class's L1 and L2 including the equation of the line of best fit and the  $r$  value. Round all decimals to two decimal places. Complete an analysis of L3 and L4 similarly.

L1, L2 \_\_\_\_\_

\_\_\_\_\_

L3, L4 \_\_\_\_\_

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17. What conclusions can be drawn from the data collected?

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18. What was the average age of the students in this class in the second grade? Seventh grade? Explain how you get your answer.

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