**Algebra 1** - Create Your Own Monopoly Board Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Block: \_\_\_\_\_

|  |  |  |
| --- | --- | --- |
| Property | Spaces From Go | Cost ($) |
| Mediterranean Avenue | 1 | 60 |
| Baltic Avenue | 3 | 60 |
| Reading Railroad | 5 | 200 |
| Oriental Avenue | 6 | 100 |
| Vermont Avenue | 7 | 100 |
| Connecticut Avenue | 9 | 120 |
| St. Charles Place | 11 | 140 |
| Electric Company | 12 | 150 |
| States Avenue | 13 | 140 |
| Virginia Avenue | 14 | 160 |
| Penn Railroad | 15 | 200 |
| St. James Place | 16 | 180 |
| Tennessee Avenue | 18 | 180 |
| New York Avenue | 19 | 200 |
| Kentucky Avenue | 21 | 220 |
| Indiana Avenue | 22 | 220 |
| Illinois Avenue | 23 | 240 |
| B & O Railroad | 25 | 200 |
| Atlantic Avenue | 26 | 260 |
| Ventnor Avenue | 27 | 260 |
| Water Works | 28 | 150 |
| Marvin Gardens | 29 | 280 |
| Pacific Avenue | 31 | 300 |
| North Carolina Avenue | 33 | 300 |
| Pennsylvania Avenue | 34 | 320 |
| Short Line Railroad | 35 | 200 |
| Park Place | 37 | 350 |
| Boardwalk | 39 | 400 |

1. Define your input value/independent quantity/x value.
2. Define your output value/dependent quantity/y value.
3. Find the linear regression equation for the data.   
   Regression Equation (round to two decimal places):  
     
   Correlation Coefficient (round to four decimal places):
4. Find the linear regression equation for the data EXCLUDING railroads.

Regression Equation (round to two decimal places):

Correlation Coefficient (round to four decimal places):

1. Name one reason why the correlation coefficient improved in #4.
2. Use your regression equation from #4 for the following questions:
   1. What is the slope of the equation? Label correctly.
   2. Interpret the slope in terms of the problem situation.
   3. What is the y-intercept of the equation? Label correctly.
   4. Interpret the y-intercept in terms of the problem situation.
   5. Determine what a space 18 spaces from go should cost, according to your linear regression equation. What does the 18th space cost according to the table? Explain the difference in the two answers.
   6. Fill out your monopoly board with the rest of the prices. You must fill out the table on the back of this sheet as well as the monopoly board. Name all your properties and use the regression equation to determine their costs.

|  |  |  |
| --- | --- | --- |
| Property | Spaces From Go | Cost |
|  | 42 |  |
|  | 43 |  |
|  | 44 |  |
| Railroad | 45 | 200 |
|  | 46 |  |
|  | 47 |  |
| Utility | 48 | 150 |
|  | 49 |  |
|  | 51 |  |
|  | 52 |  |
|  | 54 |  |
| Railroad | 55 | 200 |
|  | 57 |  |
|  | 59 |  |

Rubric:

|  |  |  |
| --- | --- | --- |
| Question | Available points | Earned Points |
| #1 | 1 |  |
| #2 | 1 |  |
| #3 | 2 |  |
| #4 | 2 |  |
| #5 | 1 |  |
| #6a | 1 |  |
| #6b | 1 |  |
| #6c | 1 |  |
| #6d | 1 |  |
| #6e | 3 |  |
| Property Titles | 5 |  |
| Property Costs | 11 |  |
| TOTAL | 30 | /30 |