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| PH 201-8  Quiz 1  Hand Graphing | Name:\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  (please print and also put your name on the back) |

Line Eq: Slope:

The graph below was made with the linearized version of the data that follows (the first and third columns) and the first 2 columns fit the nominal equation: . (this is the equation for an object beginning at rest and falling from a height of meters).

Add labels to the axis and an appropriate title (9 PTS)

|  |  |  |
| --- | --- | --- |
| time(seconds) | distance(meters) | Distance Squared (meters squared) |
| 0.25 | 59.50 | 3540.25 |
| 0.5 | 58.50 | 3422.25 |
| 0.75 | 57.00 | 3249 |
| 1 | 52.00 | 2704 |
| 1.25 | 51.50 | 2652.25 |
| 1.5 | 48.50 | 2352.25 |
| 1.75 | 45.00 | 2025 |
| 2 | 42.00 | 1764 |
| 2.25 | 35.50 | 1260.25 |
| 2.5 | 28.00 | 784 |

Pick 2 points on the trend line and use them to calculate the slope and y-intercept using the functions above. (The more explicit you are with showing work the more partial credit I can give if you make a mistake). For extra credit find the value of q in the nominal equation. (Attach extra paper if needed). (21 pts)