Algebra 1 Name _____ ID

Date _____ Period

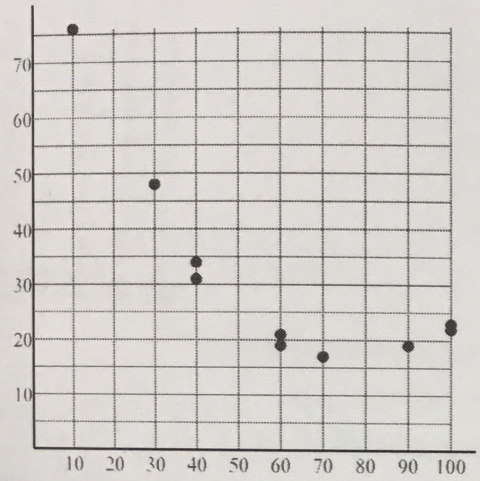
**Construct a scatter plot. State if there appears to be a positive correlation, negative correlation, or no correlation. When there is a correlation, find the slope-intercept form of the equation of the line that best fits the data and its correlation coefficient.**

1)

| X | Y |
|---|---|
| 10 | 76 |
| 30 | 48 |
| 60 | 19 |
| 90 | 19 |

| X | Y |
|---|---|
| 60 | 21 |
| 100 | 23 |
| 70 | 17 |

| X | Y |
|---|---|
| 40 | 34 |
| 100 | 22 |
| 40 | 31 |




Negative correlation

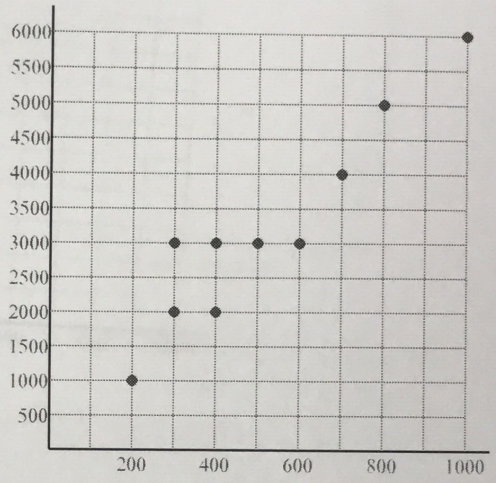
$y = -0.47619x + 59.571$

r= -0.79

2)

| X | Y |
|---|---|
| 400 | 2,000 |
| 700 | 4,000 |
| 400 | 3,000 |
| 300 | 3,000 |
| 1,000 | 6,000 |

| X | Y |
|---|---|
| 600 | 3,000 |
| 200 | 1,000 |
| 500 | 3,000 |
| 800 | 5,000 |
| 300 | 2,000 |




Positive correlation

$y = 5.4861x + 347.22$

r= .94

**All the cases below are correlated. Identify whether the situations below represent causation or just correlation.**

3) 1. The number of cold, snowy days and the amount of hot chocolate sold at a ski resort. Correlatio

2. The number of miles (at a constant speed on a level road) and the amount of gas used. Causatio

3. The number of additional calories consumed and the amount of weight gained. causation

4. The age of a child and their shoe size. correlation

5. The amount of cars a salesperson sells and how much commission she makes. causation

6. The number of cars traveling over a busy holiday weekend and the number of accidents reported. Correlation

7. The number of HW assignments handed in and the person's grade in the class. causation

8. Annual salary and blood pressure for men aged 20-60. correlation