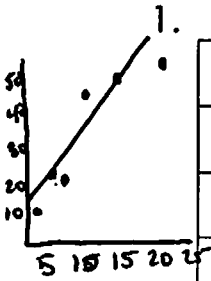


Coordinate Algebra
Linear Regression

Name Key

Class Period 1/28/15

Find the line of best fit and the correlation coefficient for the following data.



| X | Y |
|----|----|
| 3 | 10 |
| 5 | 22 |
| 6 | 21 |
| 10 | 45 |
| 15 | 48 |
| 22 | 52 |

1.

$$a = 2.19$$

$$b = 10.73$$

$$y = 2.19x + 10.73$$

$$r = .90$$

2.

| X | Y |
|-----|----|
| 150 | 34 |
| 167 | 43 |
| 182 | 32 |
| 197 | 21 |
| 202 | 28 |
| 211 | 37 |

$$a = -0.13$$

$$b = 55.89$$

$$r = -0.39$$

$$y = -0.13x + 55.89$$

3.

| X | Y |
|----|-----|
| 8 | 101 |
| 12 | 89 |
| 15 | 94 |
| 20 | 67 |
| 25 | 72 |
| 28 | 43 |

~~a = -2.54~~
~~b = 123.45~~
~~r = -0.92~~

$$a = -2.54$$

$$b = 123.45$$

$$r = -0.92$$

$$y = -2.54x + 123.45$$

4.

| X | Y |
|-----|----|
| 76 | 23 |
| 49 | 3 |
| 10 | 89 |
| 125 | 32 |
| 178 | 43 |
| 16 | 90 |

$$a = -0.25$$

$$b = 65.36$$

$$r = -0.45$$

$$y = -0.25x + 65.36$$