

11/6 - Dr. Downing

Line of Best Fit - a straight line that helps describe the correlation between data sets clearly.

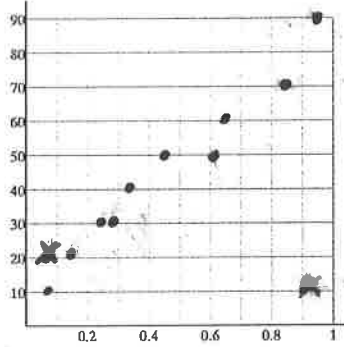
★ This line follows the same direction as most of the data points and has an even amount of points above and below it.

$y = ax + b$   
 $a = 79.83$   
 $b = 8.92$   
 ~~$r = .981$~~   
 $r = .981 \rightarrow$  very strong positive correlation  
Line of Best Fit  
 $y = 79.83x + 8.92$

Construct a scatter plot. Then, using your GDC find your line of best fit and correlation coefficient.

1)

| X    | Y  | X    | Y  | X    | Y  |
|------|----|------|----|------|----|
| 0.09 | 10 | 0.31 | 40 | 0.64 | 60 |
| 0.14 | 20 | 0.46 | 50 | 0.83 | 70 |
| 0.23 | 30 | 0.6  | 50 | 0.96 | 90 |
| 0.26 | 30 |      |    |      |    |



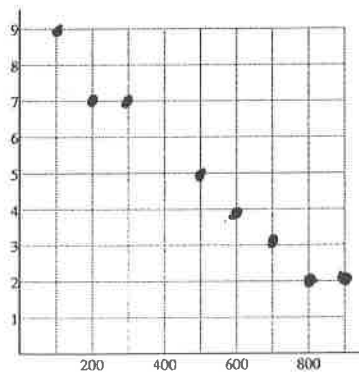
Is the correlation of the data positive, negative or no correlation?

Oct 25-10:26 AM

Construct a scatter plot. Then, using your GDC find your line of best fit and correlation coefficient.

2)

| X   | Y | X   | Y | X   | Y |
|-----|---|-----|---|-----|---|
| 100 | 9 | 500 | 5 | 700 | 3 |
| 100 | 9 | 500 | 5 | 800 | 2 |
| 200 | 7 | 600 | 4 | 900 | 2 |
| 300 | 7 |     |   |     |   |



Is the correlation of the data positive, negative or no correlation?

Oct 25-10:30 AM

$y = ax + b$   
 $a = -.009$   
 $b = 9.56$   
 ~~$r = -.989$~~   
 $r = -.989$   
Line of Best Fit  
 $y = -.009x + 9.56$