Supervisor: Ms.Shaista Rais

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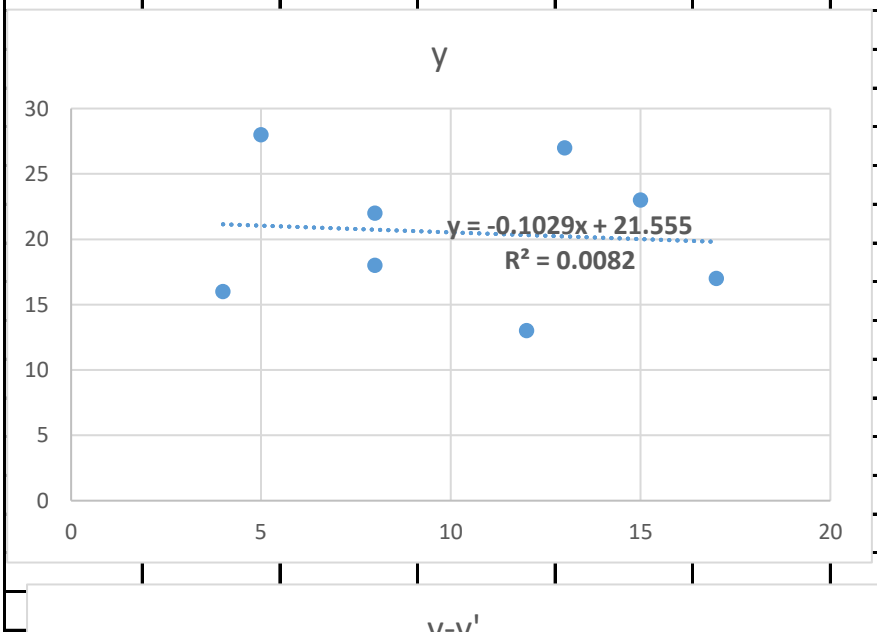
| | x | y | x-x' | y-y' | (x-x')(y-y') | x^2 | y^2 | xy | (x-x')^2 | (y-y')^2 |
|---|---|---|---|---|---|---|---|---|---|---|
| | 8 | 22 | -2.25 | 1.5 | -3.375 | 64 | 484 | 176 | 5.0625 | 2.25 |
| | 5 | 28 | -5.25 | 7.5 | -39.375 | 25 | 784 | 140 | 27.5625 | 56.25 |
| | 8 | 18 | -2.25 | -2.5 | 5.625 | 64 | 324 | 144 | 5.0625 | 6.25 |
| | 4 | 16 | -6.25 | -4.5 | 28.125 | 16 | 256 | 64 | 39.0625 | 20.25 |
| | 13 | 27 | 2.75 | 6.5 | 17.875 | 169 | 729 | 351 | 7.5625 | 42.25 |
| | 15 | 23 | 4.75 | 2.5 | 11.875 | 225 | 529 | 345 | 22.5625 | 6.25 |
| | 17 | 17 | 6.75 | -3.5 | -23.625 | 289 | 289 | 289 | 45.5625 | 12.25 |
| | 12 | 13 | 1.75 | -7.5 | -13.125 | 144 | 169 | 156 | 3.0625 | 56.25 |
| | | | | | | | | | | |
| sum | 82 | 164 | 0 | 0 | -16 | 996 | 3564 | 1665 | 155.5 | 202 |
| mean | 10.25 | 20.5 | | | | Sx | 4.71 | 5.37 | Sy | |
| covariance | -2.28571 | | | | | | | | | |
| covariance using formula | | | | -2.28571 | | Sx | 4.71 | | using pre- | |
| | | | | | | Sy | 5.37 | | defined | |
| | | | | | | SS(xy) | -16 | | FUNCTION | |
| | | | | | | SS(x) | 156 | | | |
| | | | | | | SS(y) | 202 | | | |

$$\text{covar}(x,y) = \frac{\sum_{i=1}^{n}(x_i-\bar{x})(y_i-\bar{y})}{n-1}$$

CALCULATION OF "r" using different formula

| | | |
|---|---|---|
| r = | -0.09028 | |
| | -2.28571 | |
| r= | -0.09028 | |
| r= | -0.09028 | |

$$r = \frac{\text{covar}(x,y)}{s_x \cdot s_y} = \frac{\frac{\sum(x-\bar{x})(y-\bar{y})}{n-1}}{s_x \cdot s_y} = \frac{SS(xy)}{\sqrt{SS(x)\cdot SS(y)}}$$



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