Trabajo en Clase

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$y = ax + b$

	x	x^2	y^2	xy
2	1,88	4	2,4964	3,76
5	12,58	25	158,2564	62,9
7	36,80	49	3256,24	257,6
9	139,50	81	17556,25	1255,5
13	201,56	169	40626,4736	2620,28
17	325,14	289	105688,0196	5527,38
21	562,23	441	316064,5529	11806,83
25	299,56	625	89738,0736	7489
Total 99	1190,95	1683	270160,343	21074,65

$$\begin{vmatrix} 1683 & 99 \\ 99 & 8 \end{vmatrix} \begin{bmatrix} a \\ b \end{bmatrix} = \begin{vmatrix} 21074,65 \\ 1190,95 \end{vmatrix}$$

$a = 13,839244$

$b = 22,391892$

$y = ax + b$

$y = 13,839244 + 22,391892$

$$r = \frac{8(21074,65) - 99(1190,95)}{\sqrt{[8(1683) - 99^2][8(270160,343) - 1190,95^2]}} = 0,971764$$

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2.) $y = bx^a$

$\ln(y) = \ln(bx^a)$

$\ln(y) = \ln(b) + a\ln(x)$

$y = B + ax$

$y = ax + b.$

x	y	x	y	x^2	y^2	xy
2	1.58	2	0,457425	4	0.20923749	0,414849
5	12.88	5	2,532408	25	6.41157	12.660341
7	56.8	7	4.039536	49	16.3178537	28.276744
9	132.5	9	4.88650	81	23.876684	43.974845
13	201.56	13	5.306087	164	28.154560	68.97913
17	225.14	17	5.416722	289	29.340881	92.08428
21	262.23	21	5.569222	441	31.0162335	116.953662
25	298.56	25	5.698497	625	32.478269	142.47427
99	1140.45	99	33.406654	1683	167.807299	306.3222731

$$\begin{vmatrix} 1683 & 99 \\ 99 & 8 \end{vmatrix} \begin{vmatrix} a \\ b \end{vmatrix} = \begin{vmatrix} 306.322737 \\ 167.807299 \end{vmatrix}$$

$1683a + 99b = 306.322737$

$99a + 8b = 167.807299$

$a = -3.42952$ $b = 68.416253$

$$r = \frac{8(306.322732) - (99)(167.807)}{\sqrt{[8(1683) - 99^2][8(167807) - (33.406654)^2]}} = 0.82561457$$

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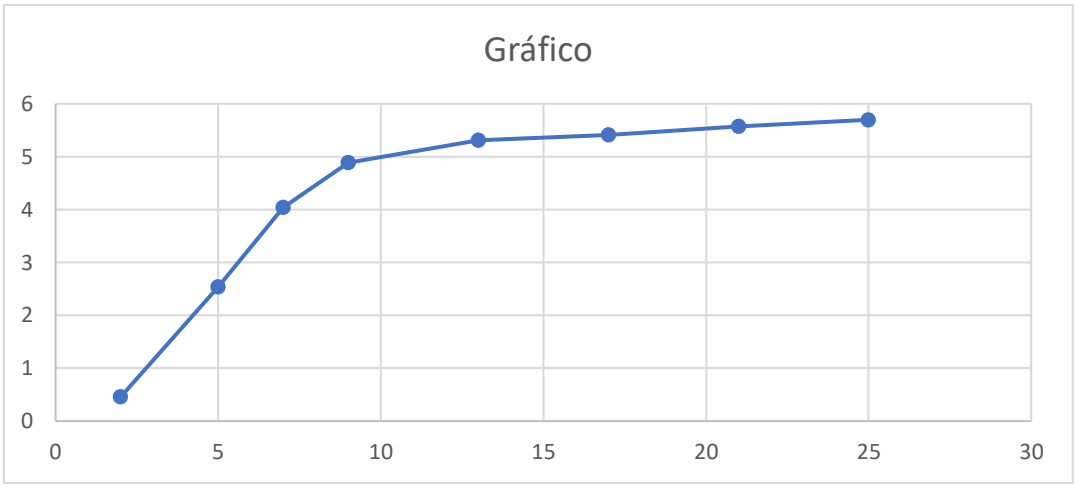
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