

$$2\sigma^2 = \sum_{k=1}^{n-1} y_k (x_{k+1} - x_k)$$

$$2\sigma^2 = (x_2 + x_1)(y_2 - y_1) + (x_3 + x_2)(y_3 - y_2) \dots$$

$$+ (x_n + x_{n-1})(y_n - y_{n-1}) + (x_1 + x_n)(y_1 - y_n)$$

$$= \sum_{k=1}^{n-1} (x_{k+1} + x_k)(y_{k+1} - y_k) \quad \text{oder}$$

$$2\sigma^2 = \sum_{k=1}^{n-1} (y_{k+1} + y_k)(x_{k+1} - x_k) \quad \text{II.}$$

Beispiel mit Doppelrechnung.

geben die Koordinaten der Punkte.

- 1) $x_1 = -889,24$ $y_1 = +2458,46$
- 2) $x_2 = -921,60$ $y_2 = +2498,64$
- 3) $x_3 = -1182,46$ $y_3 = +2667,82$
- 4) $x_4 = -1139,62$ $y_4 = +2862,80$
- 5) $x_5 = -841,50$ $y_5 = +2911,52$
- 6) $x_6 = -793,16$ $y_6 = +2640,18$

Flächenberechnung.

$(y_{k+1} + y_k) \cdot (x_{k+1} - x_k)$	x_k	y_k	$x_{k+1} - x_k$	$y_{k+1} - y_k$
	-800	+2460		
	-7924	-1,54		
25458,2	+209,36	-121,60	+38,64	-303,22
15927,66	+364,16	-382,46	+205,82	-218,02
82765,9	+243,70	-339,62	+402,80	+340,96
238,7		-222,62	+41,50	+451,52
3098,9	-1153,06	+6,84	+180,18	-377,4
215,6		-141,54	-79,24	-1,54
		-121,60	+38,64	
454,3	25959,94	0		0

$$2F = 230144,8$$

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$$F = 115072,4 \text{ qm.}$$

1) hier die fünf vorkommenden Verbindungen