

Regression

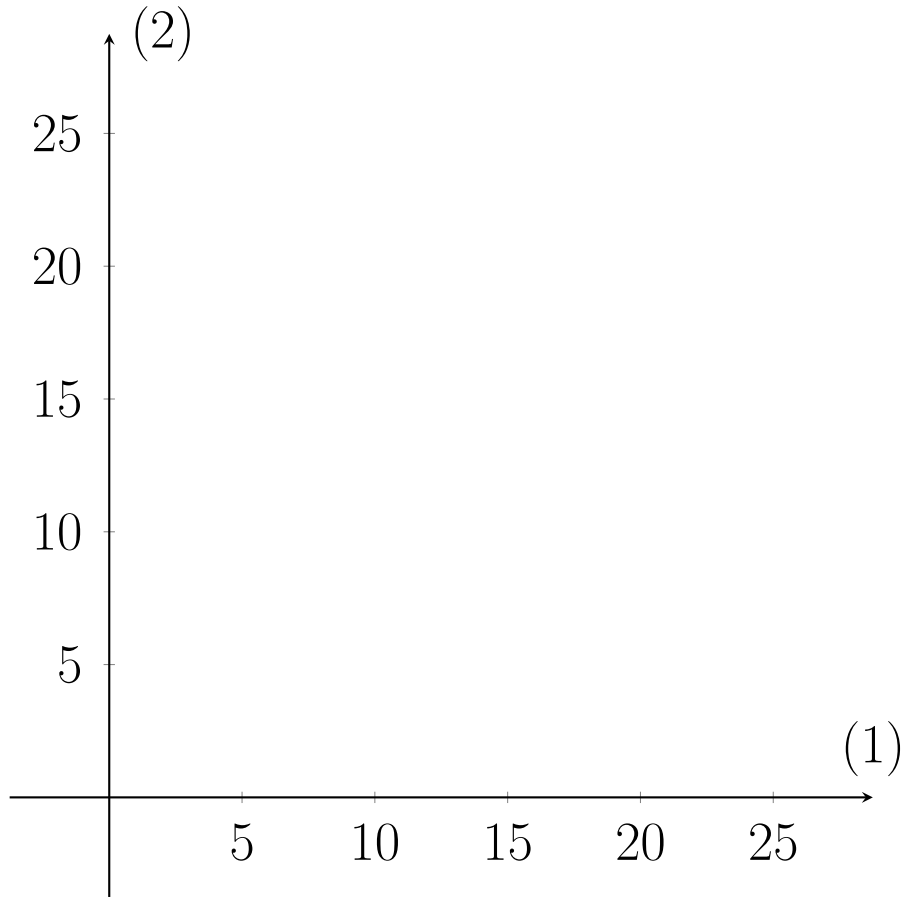
Data

x	5	6	12
y	3	10	11

Regression

Data

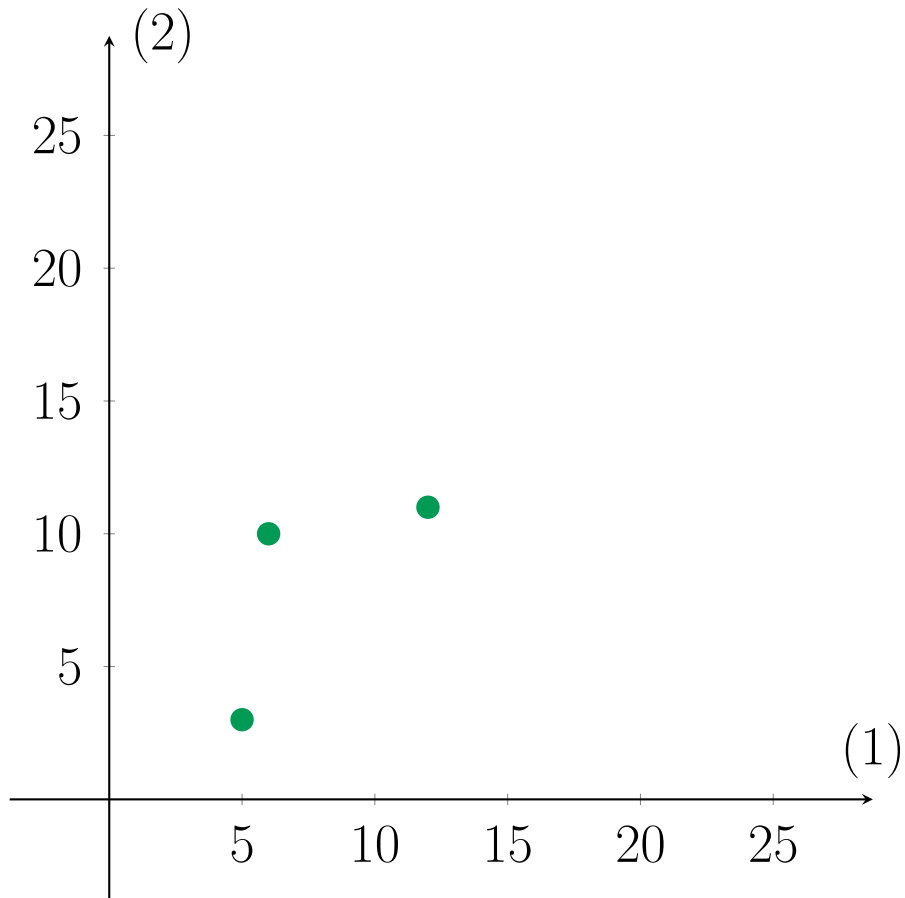
x	5	6	12
y	3	10	11



Regression

Data

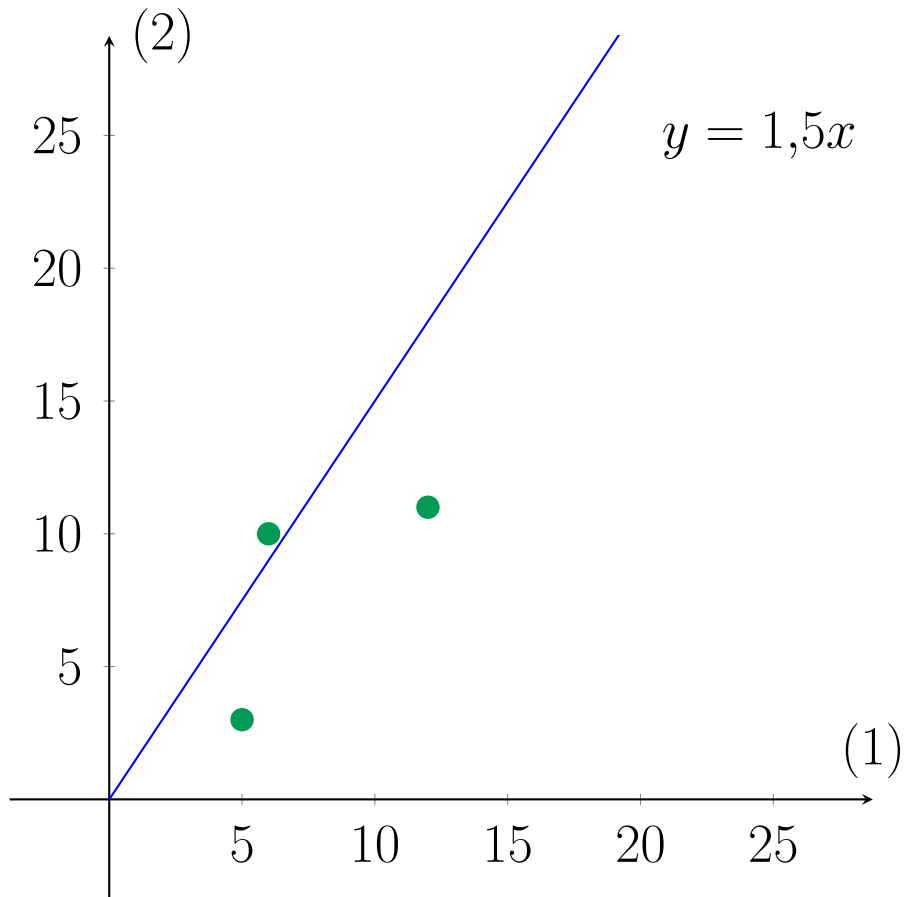
x	5	6	12
y	3	10	11



Regression

Data

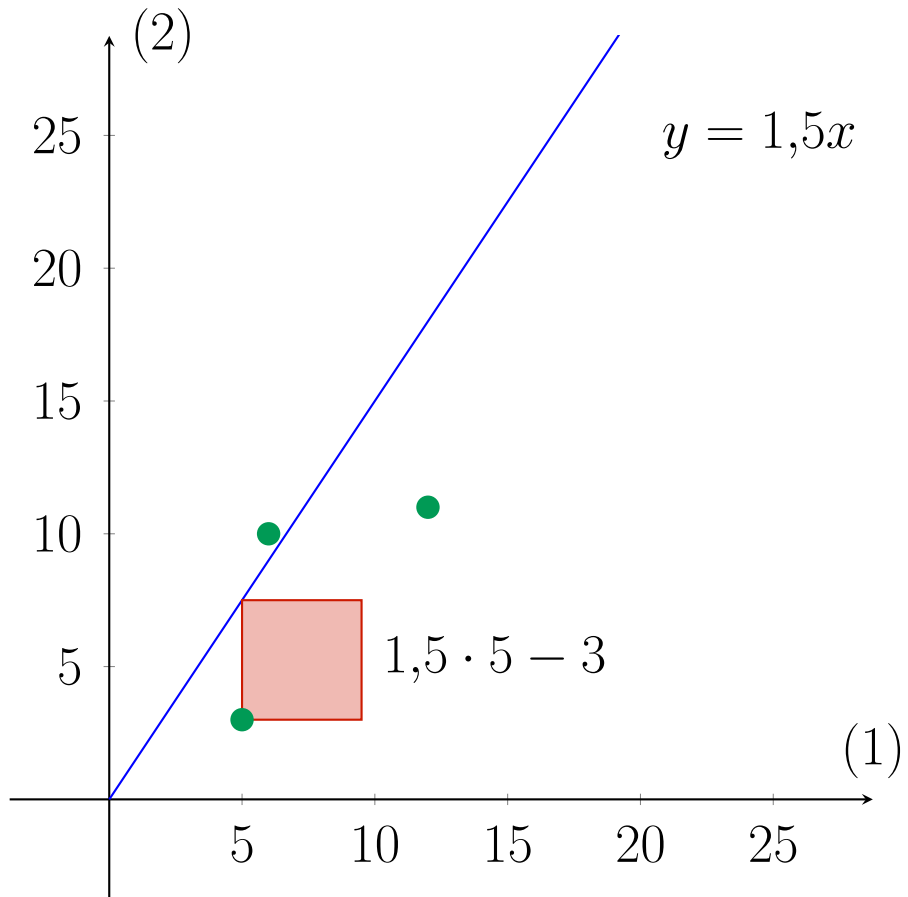
x	5	6	12
y	3	10	11



Regression

Data

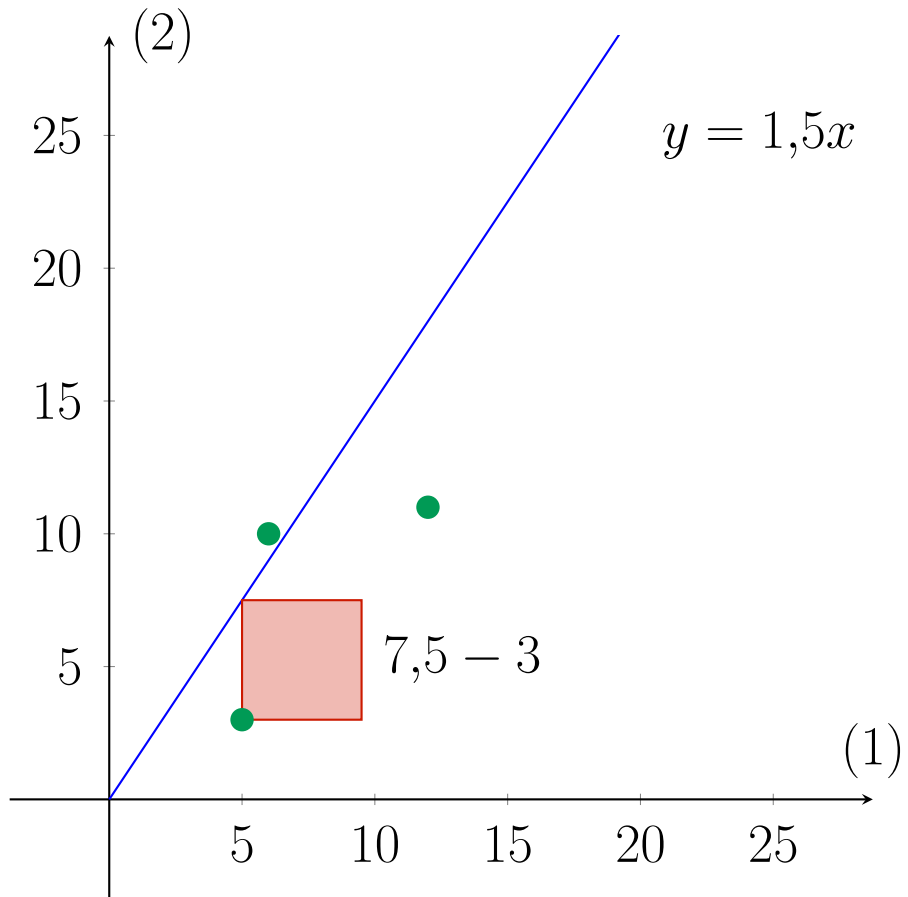
x	5	6	12
y	3	10	11



Regression

Data

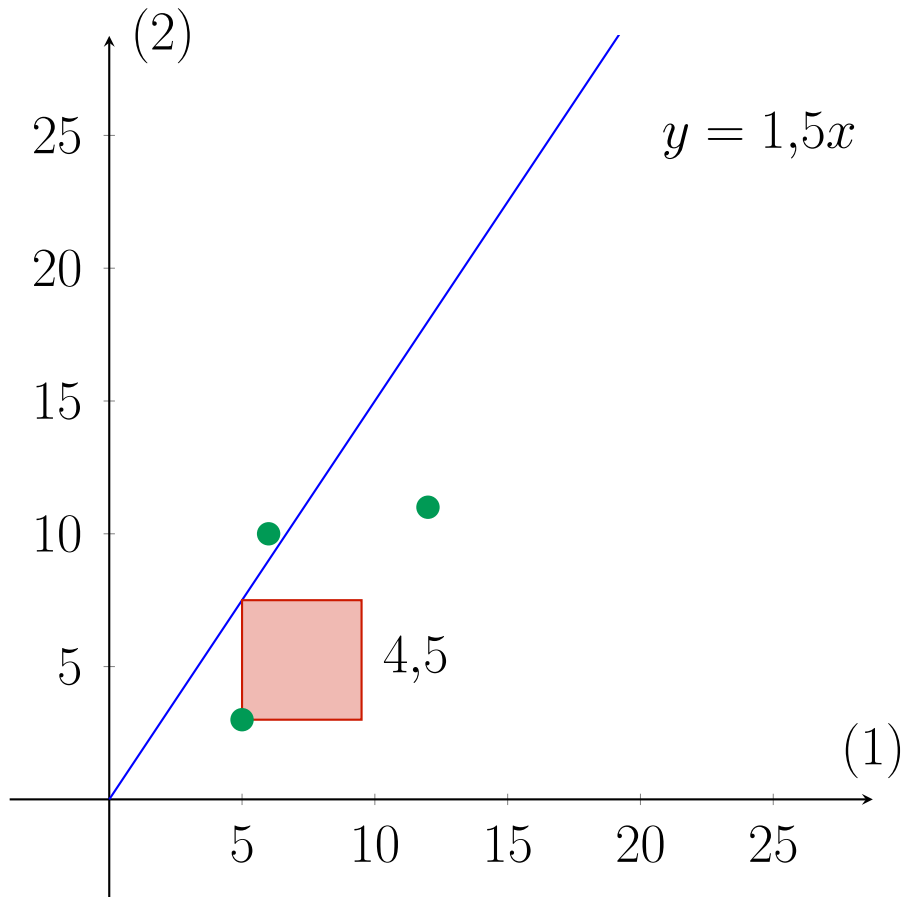
x	5	6	12
y	3	10	11



Regression

Data

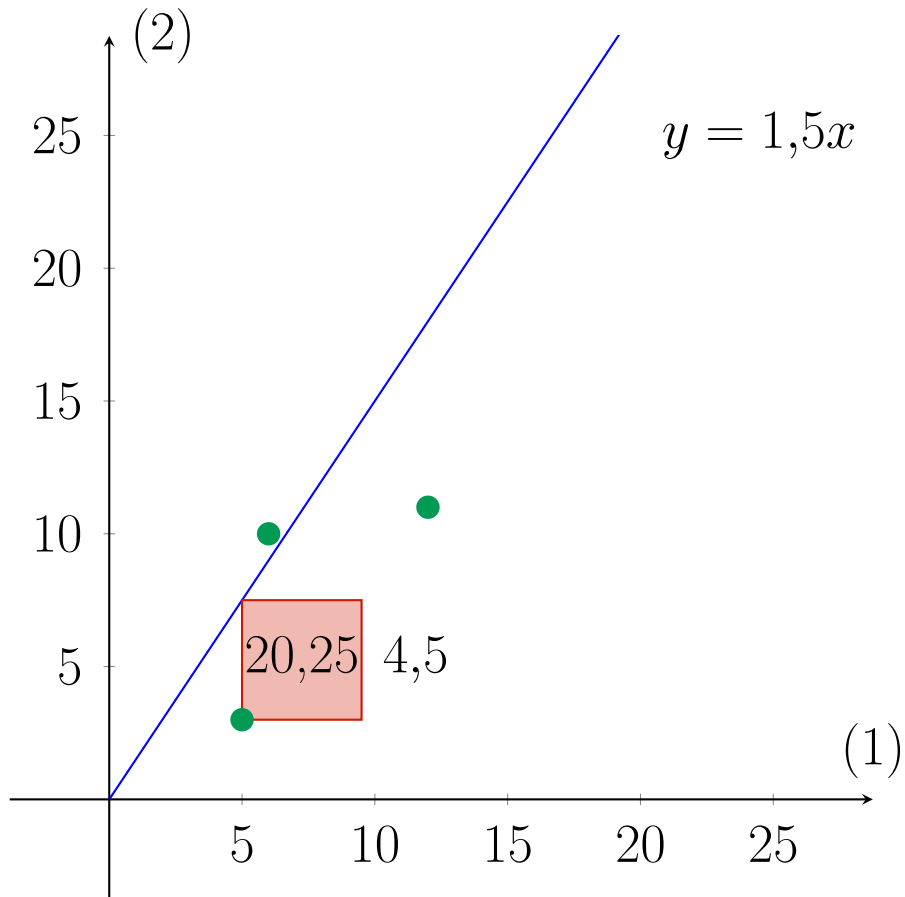
x	5	6	12
y	3	10	11



Regression

Data

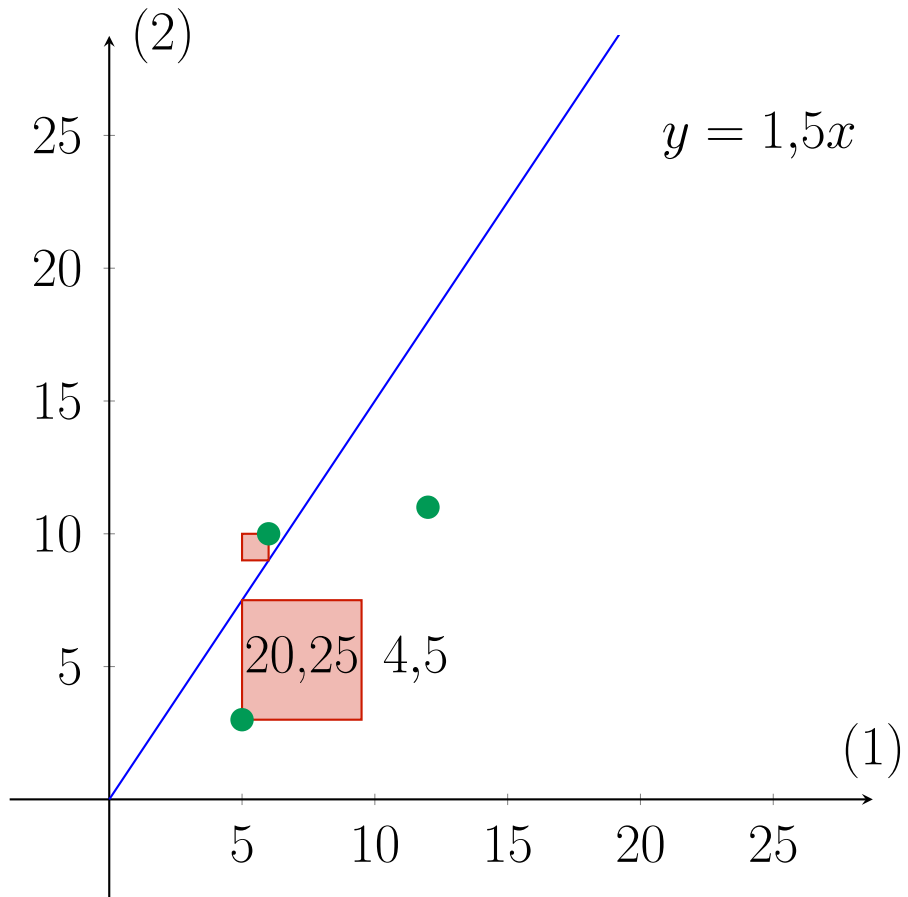
x	5	6	12
y	3	10	11



Regression

Data

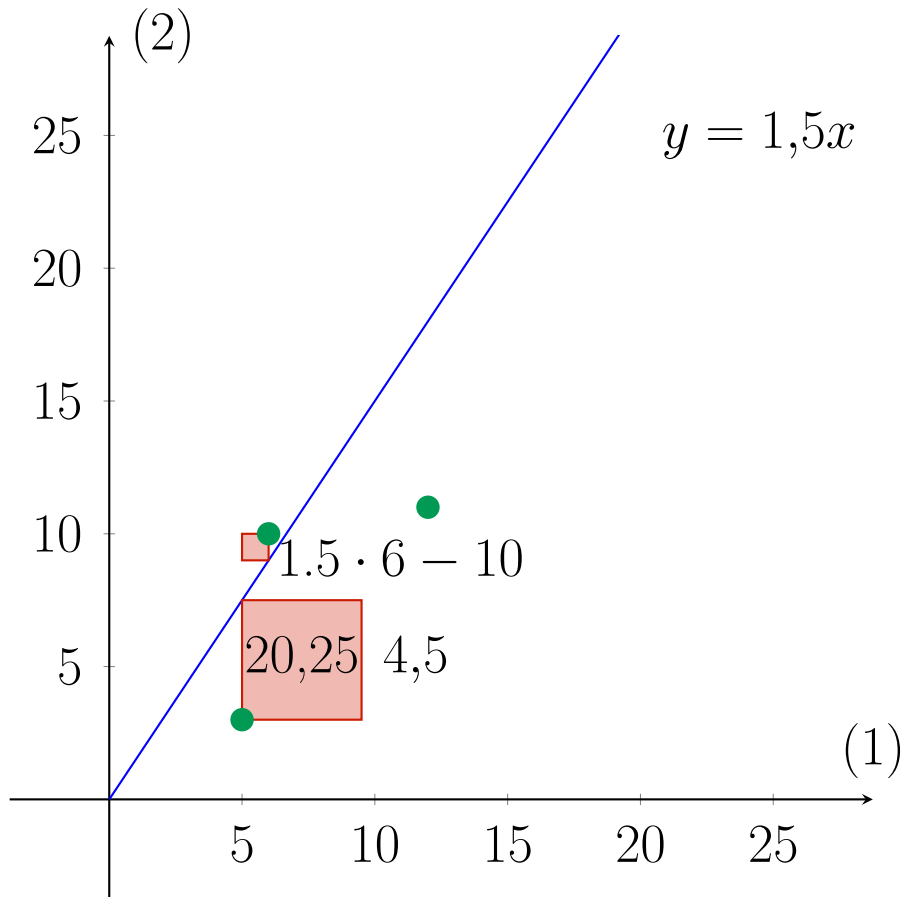
x	5	6	12
y	3	10	11



Regression

Data

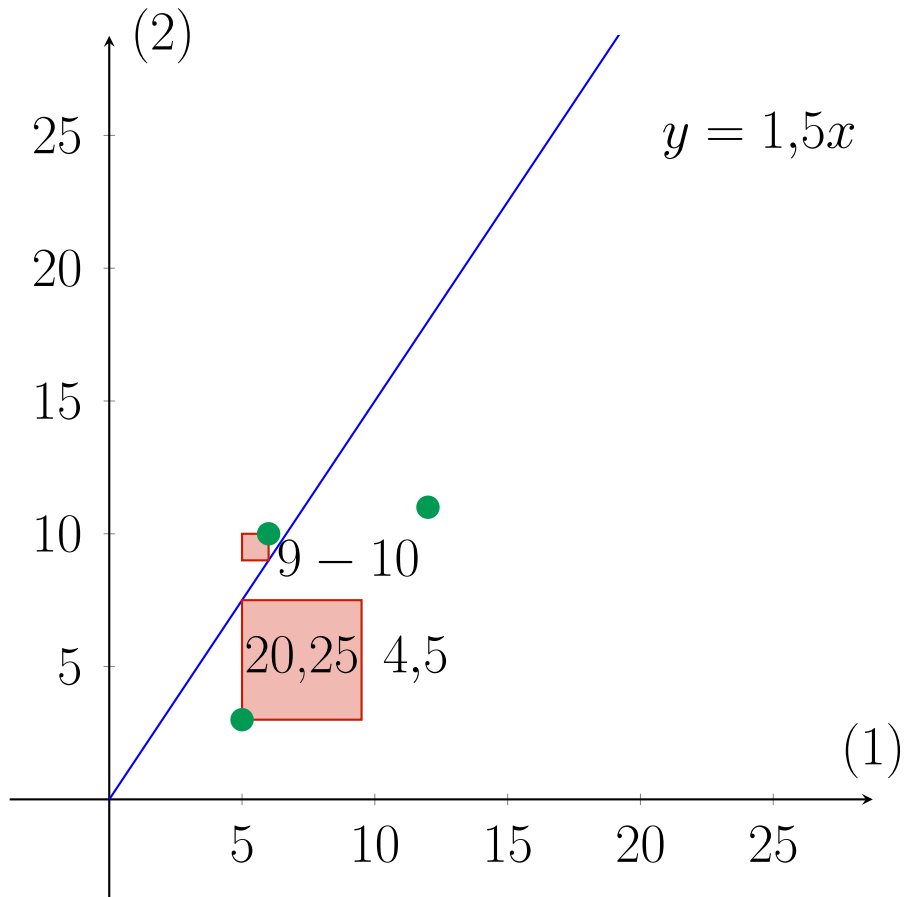
x	5	6	12
y	3	10	11



Regression

Data

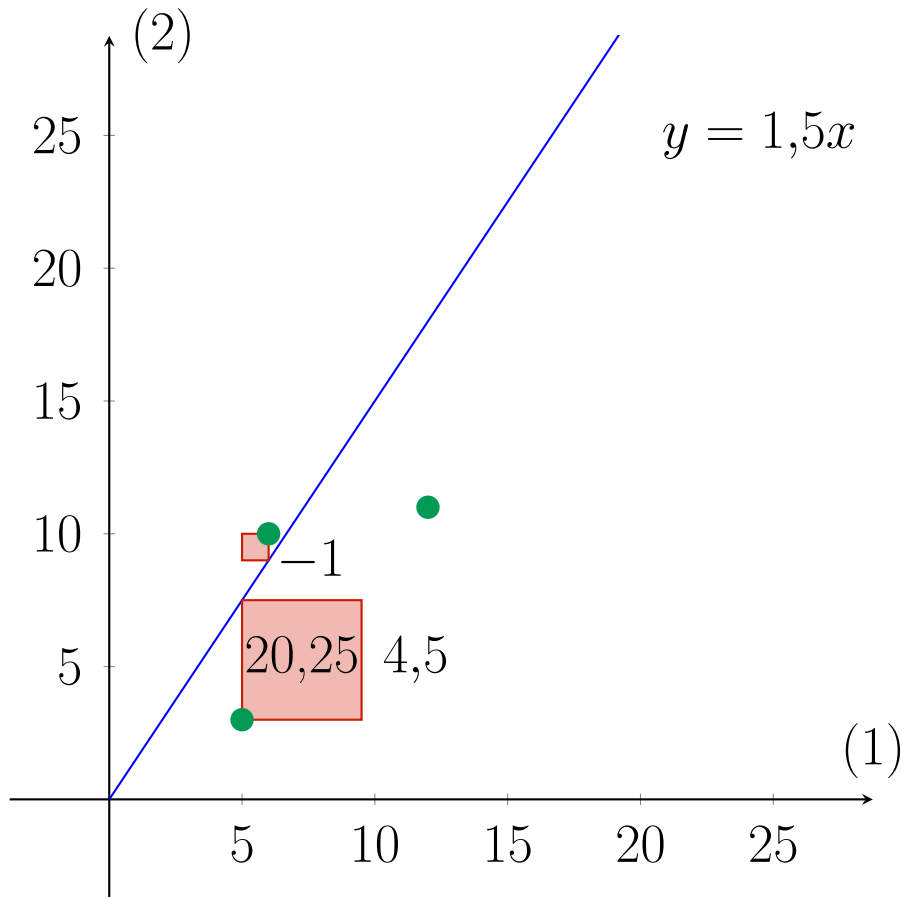
x	5	6	12
y	3	10	11



Regression

Data

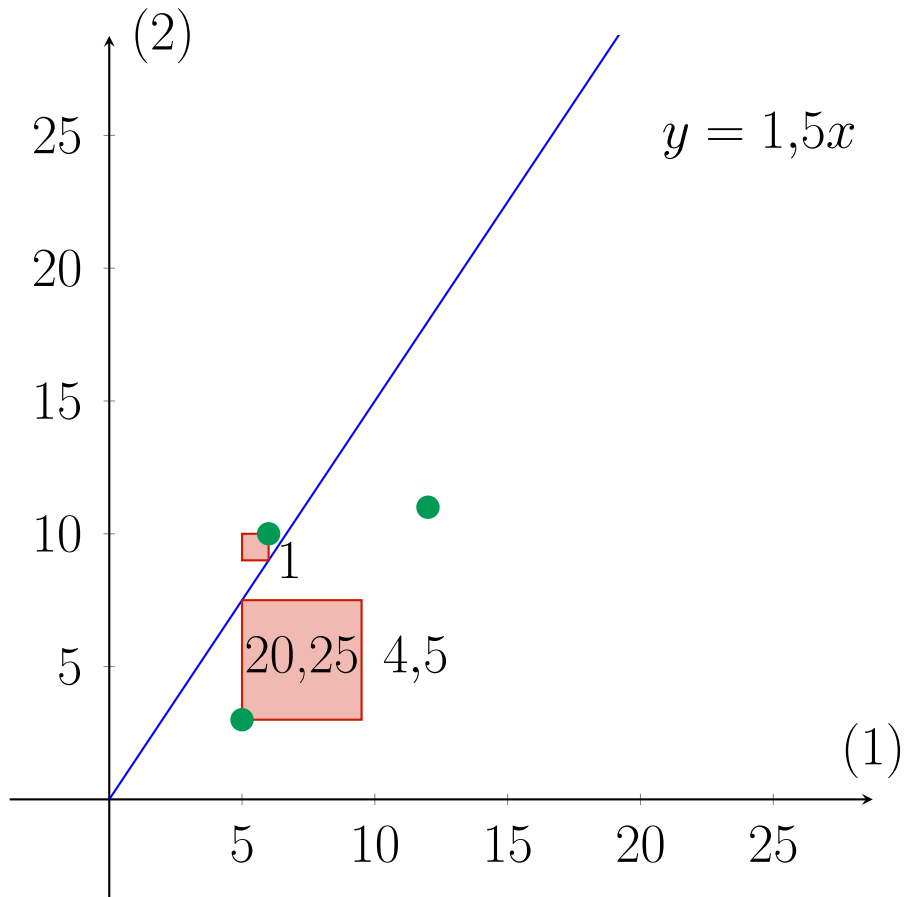
x	5	6	12
y	3	10	11



Regression

Data

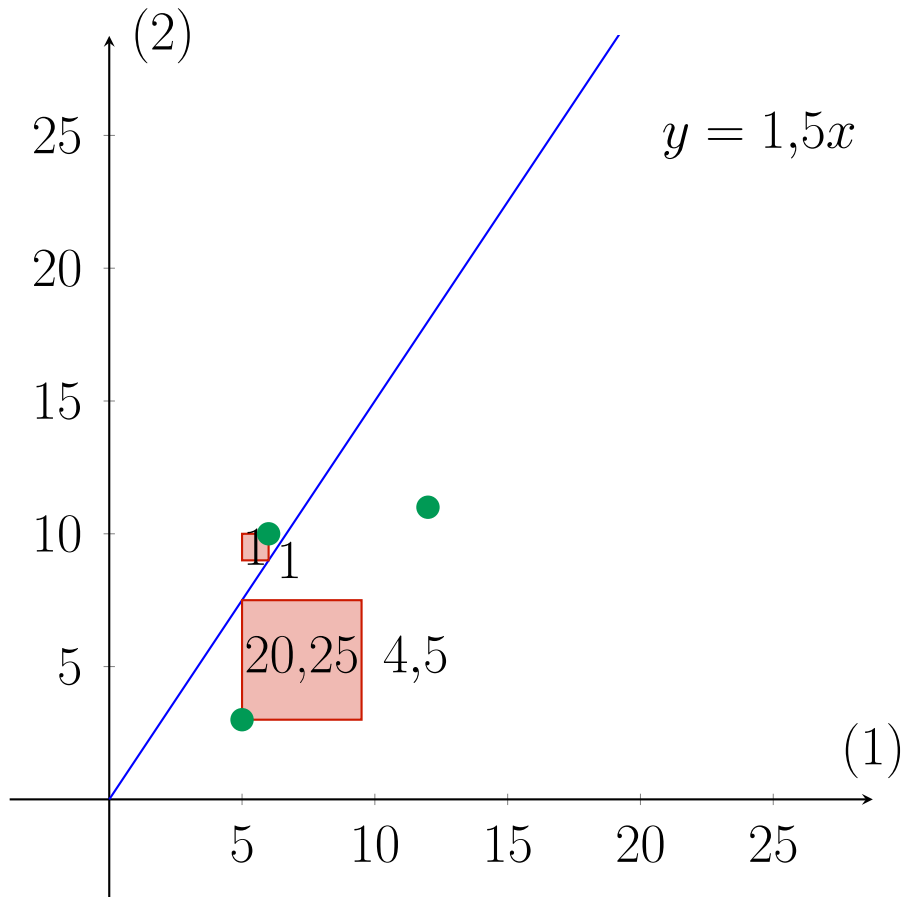
x	5	6	12
y	3	10	11



Regression

Data

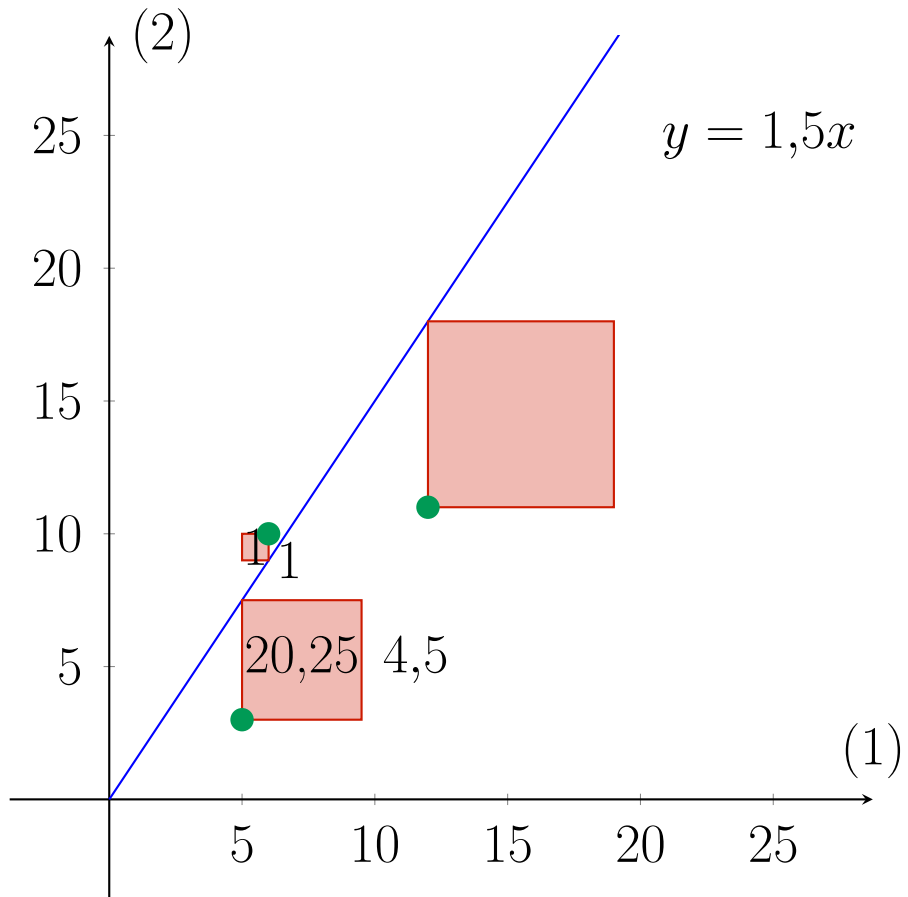
x	5	6	12
y	3	10	11



Regression

Data

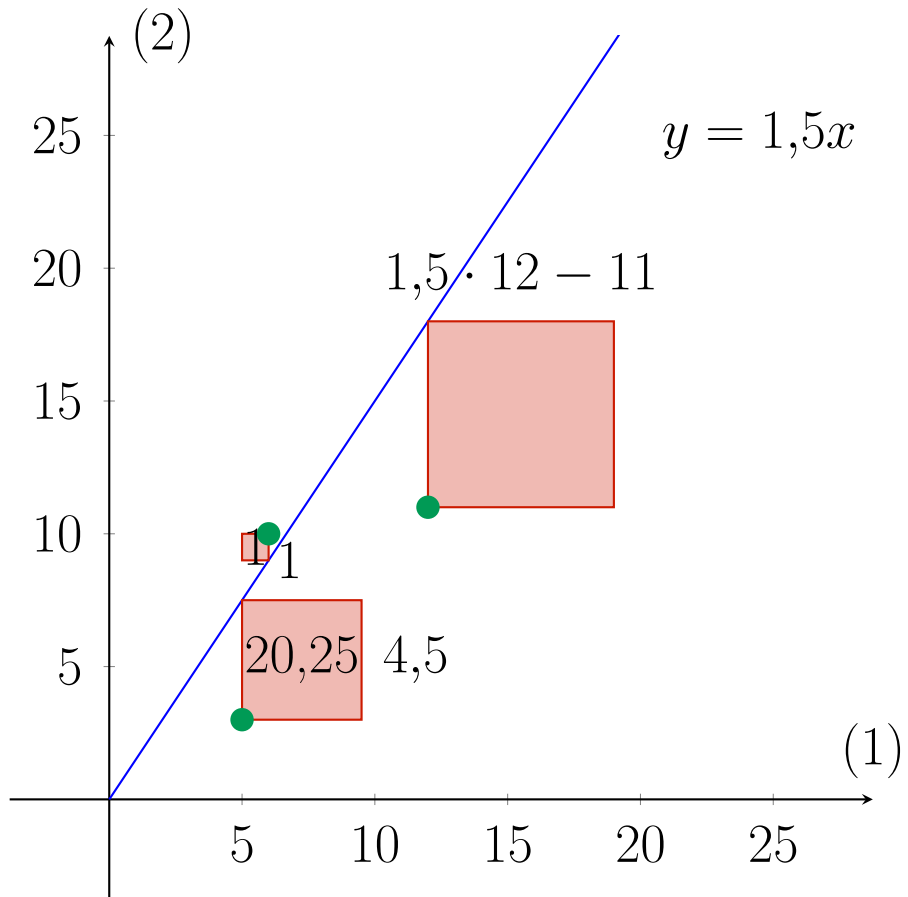
x	5	6	12
y	3	10	11



Regression

Data

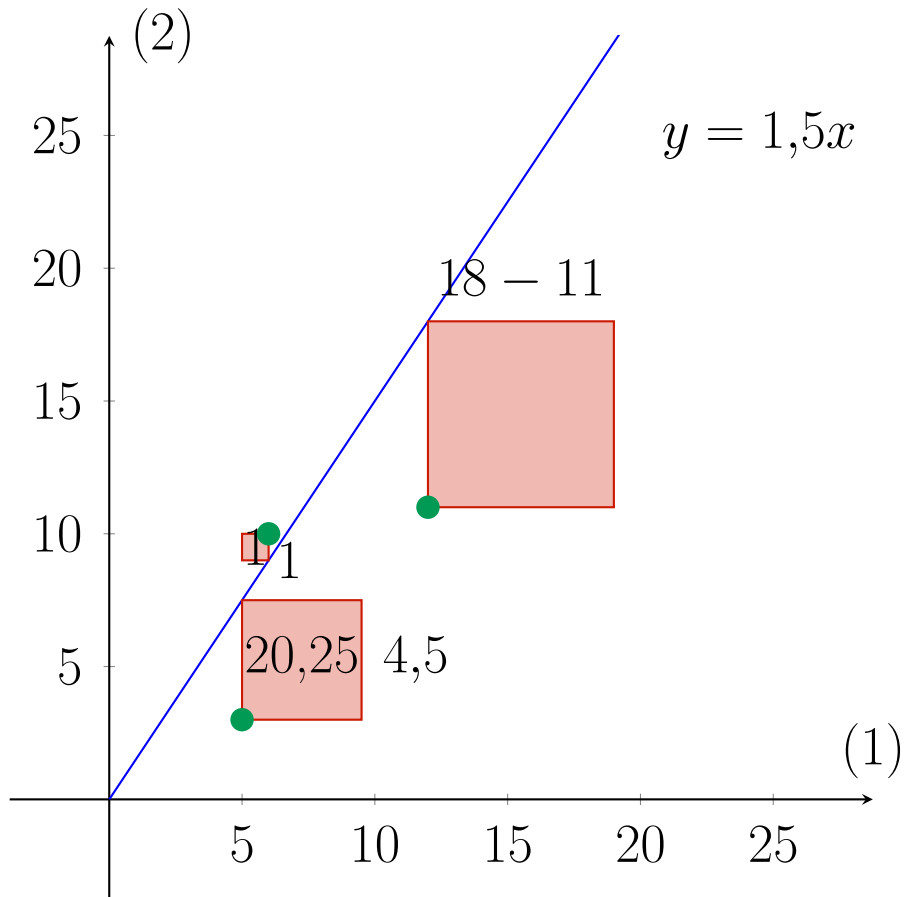
x	5	6	12
y	3	10	11



Regression

Data

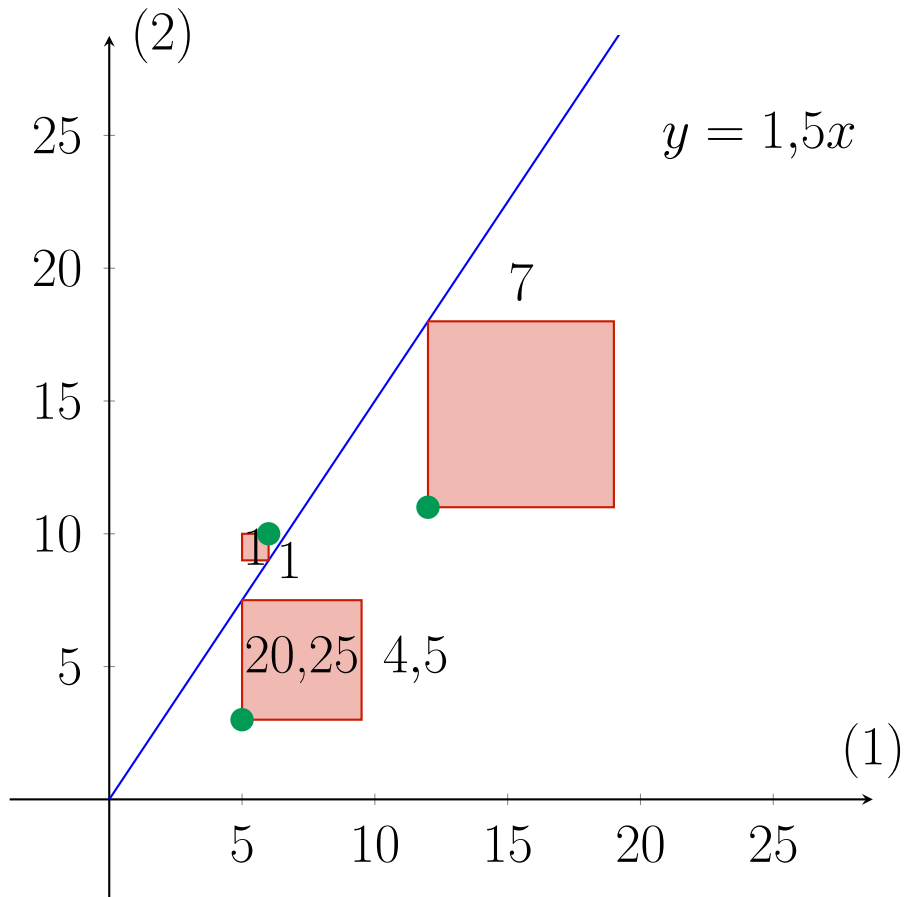
x	5	6	12
y	3	10	11



Regression

Data

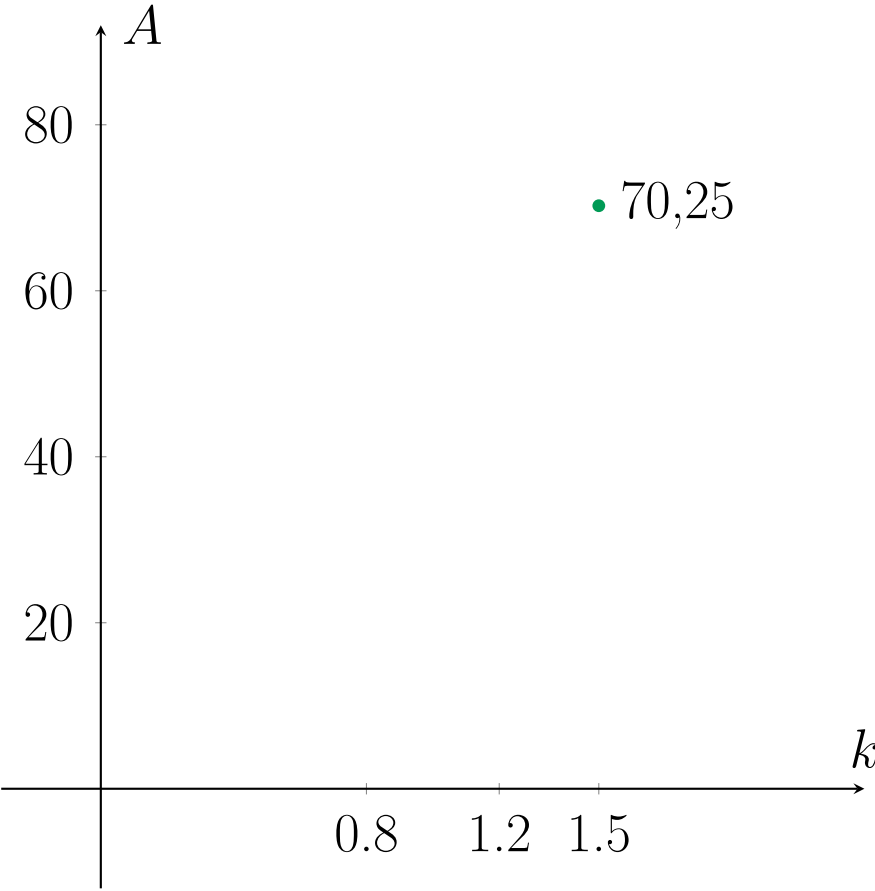
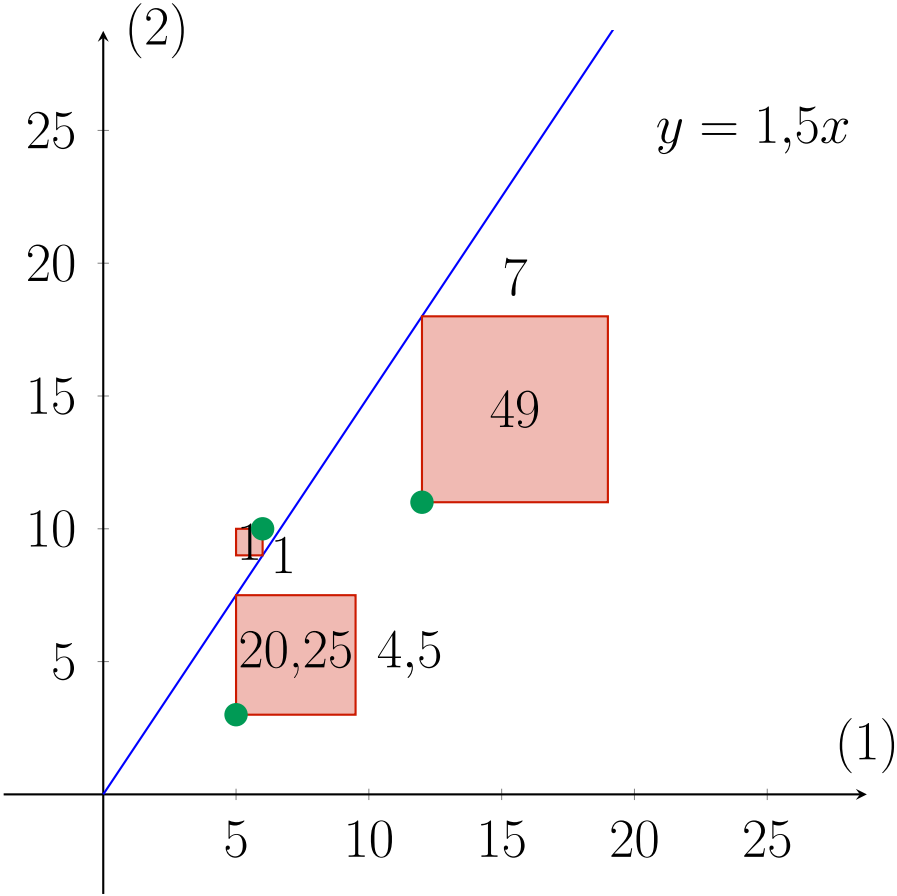
x	5	6	12
y	3	10	11



Regression

Data

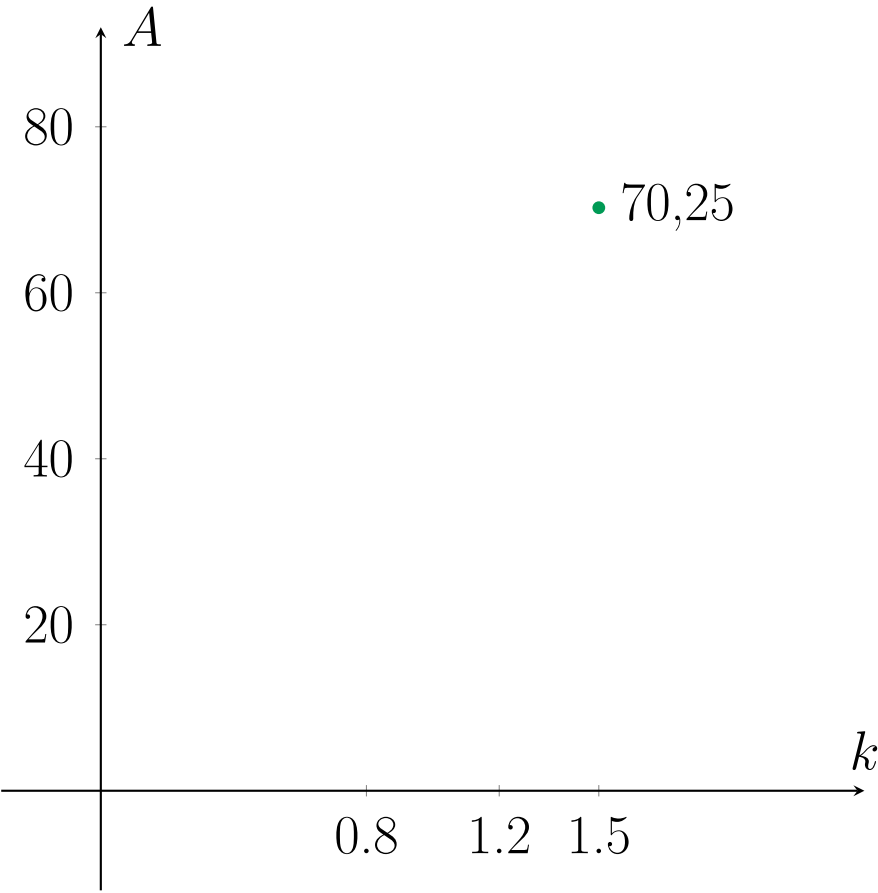
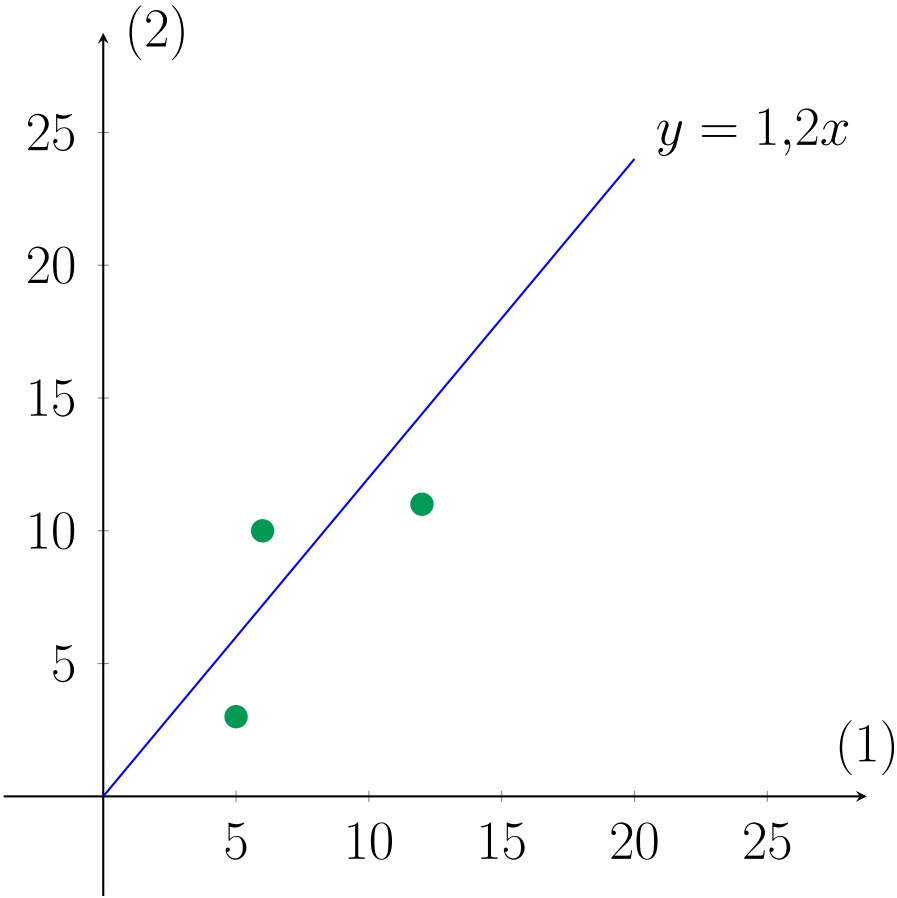
x	5	6	12
y	3	10	11



Regression

Data

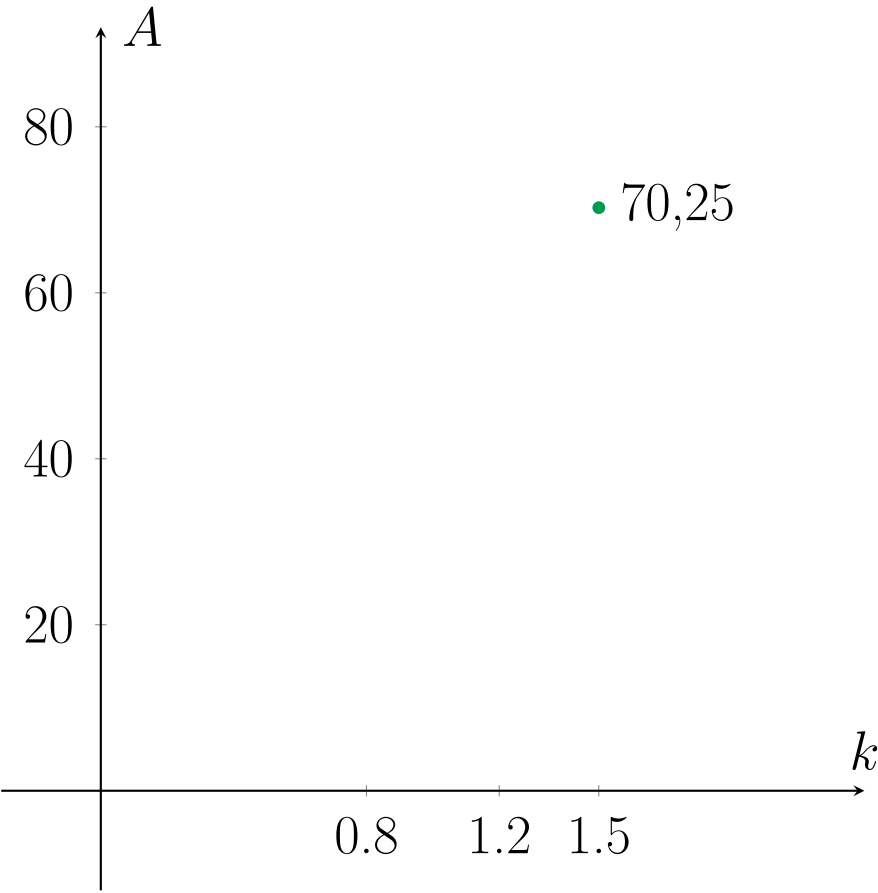
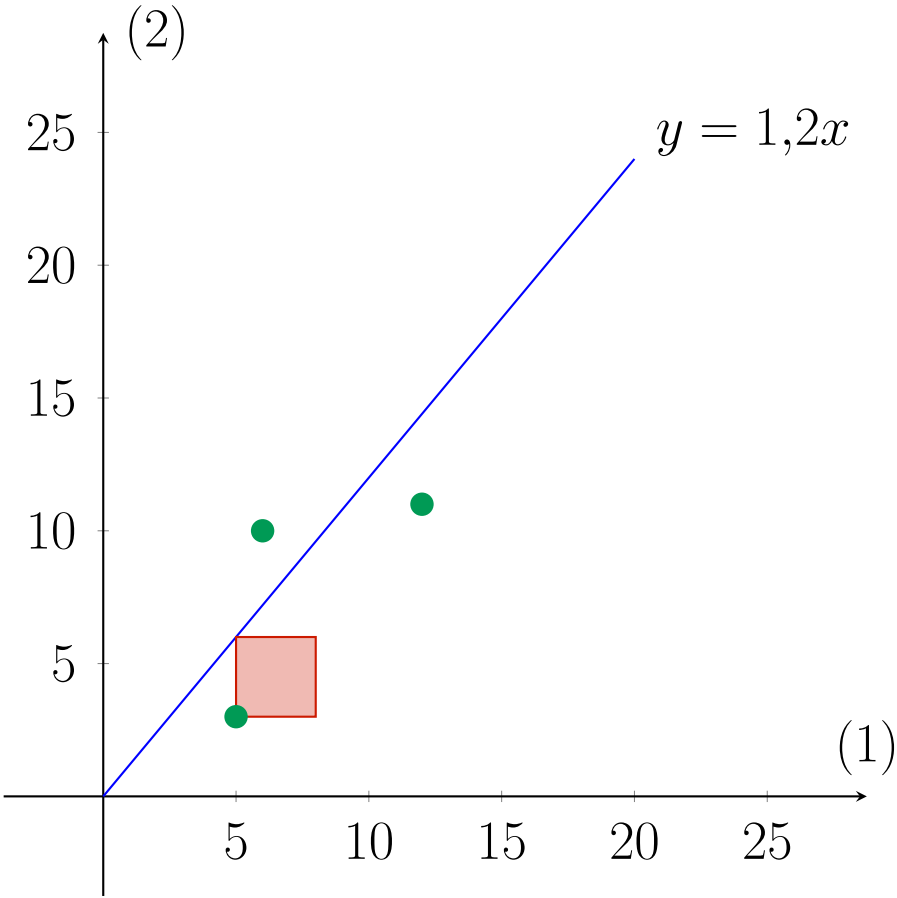
x	5	6	12
y	3	10	11



Regression

Data

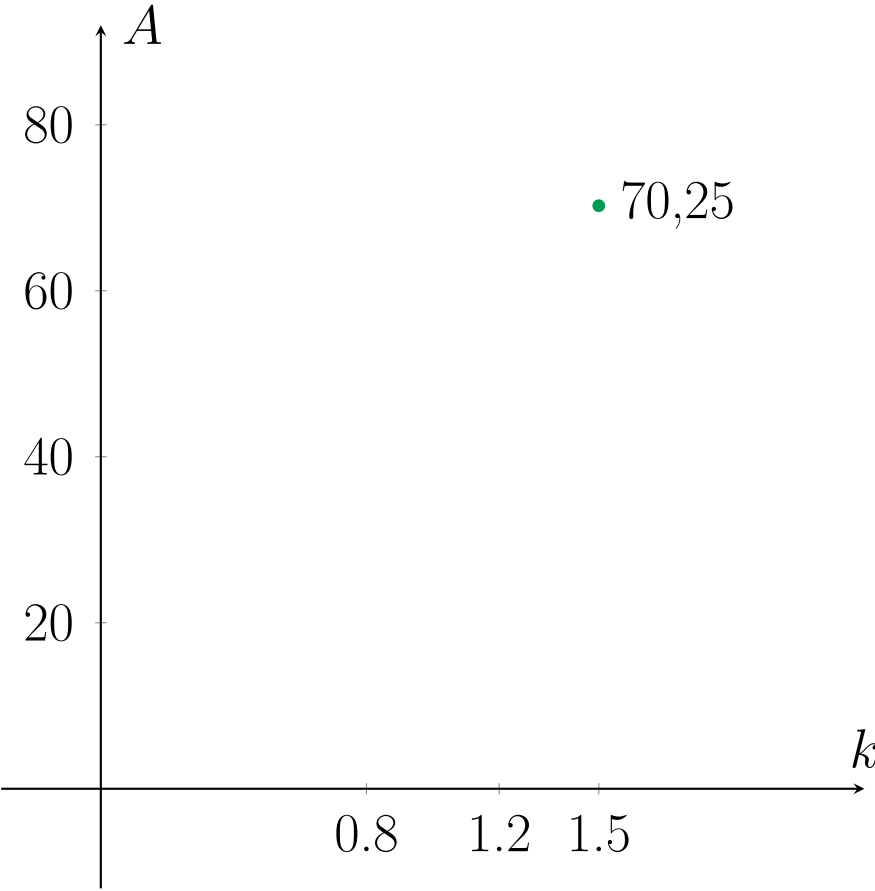
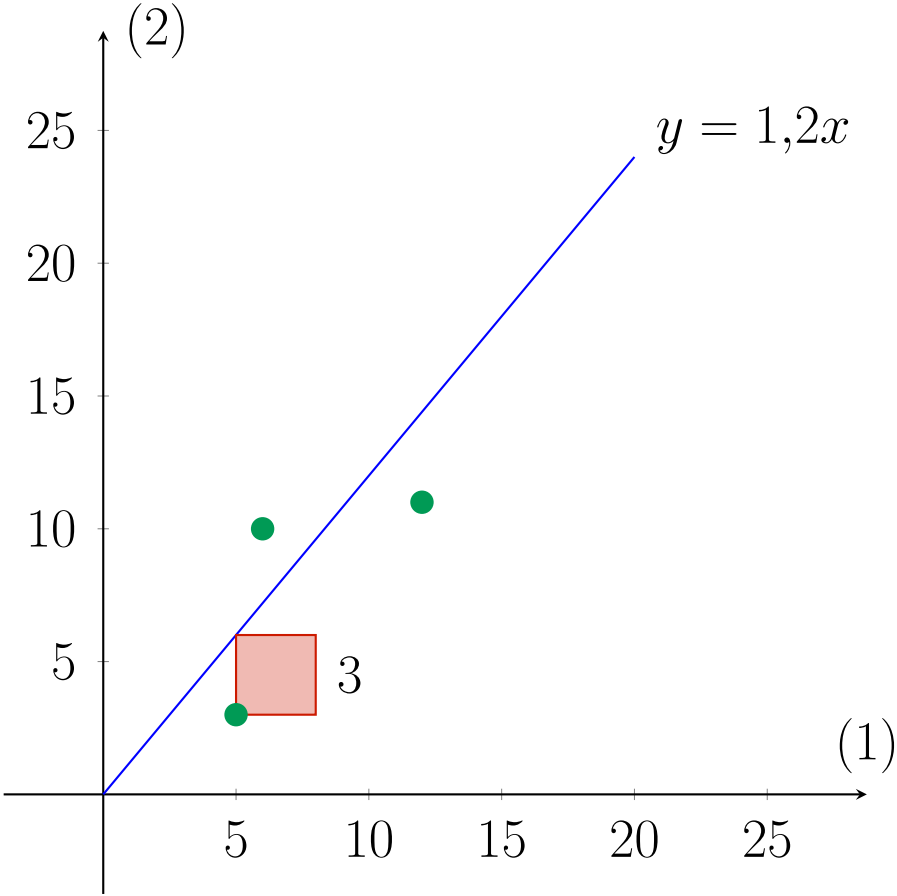
x	5	6	12
y	3	10	11



Regression

Data

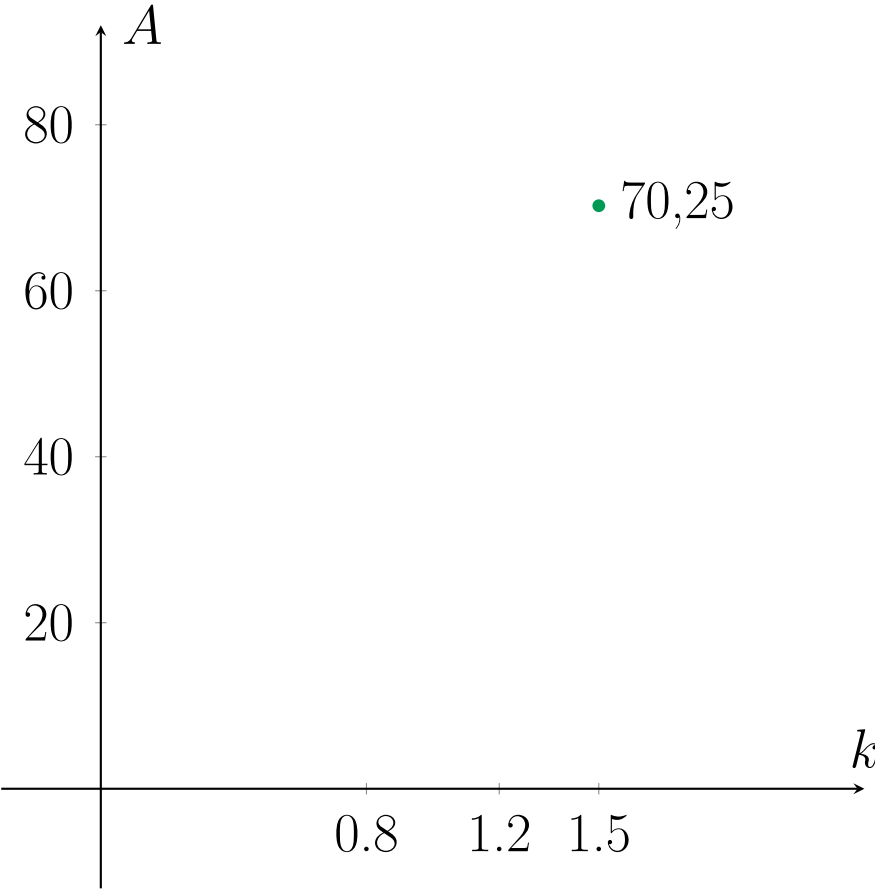
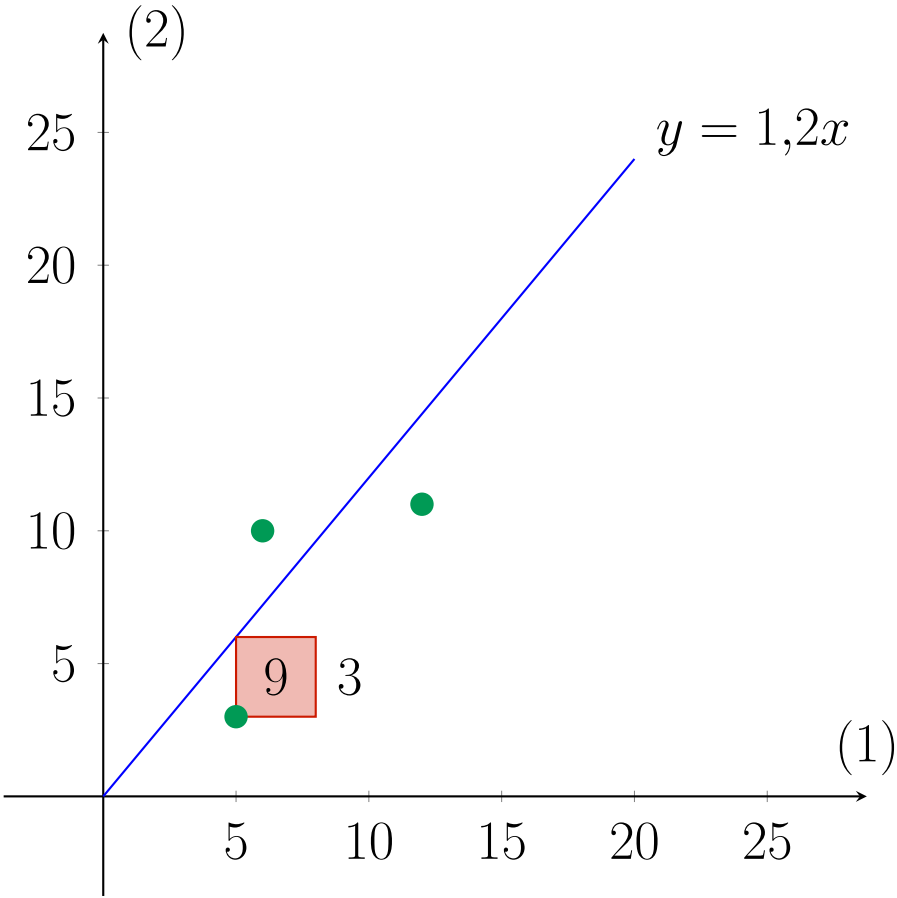
x	5	6	12
y	3	10	11



Regression

Data

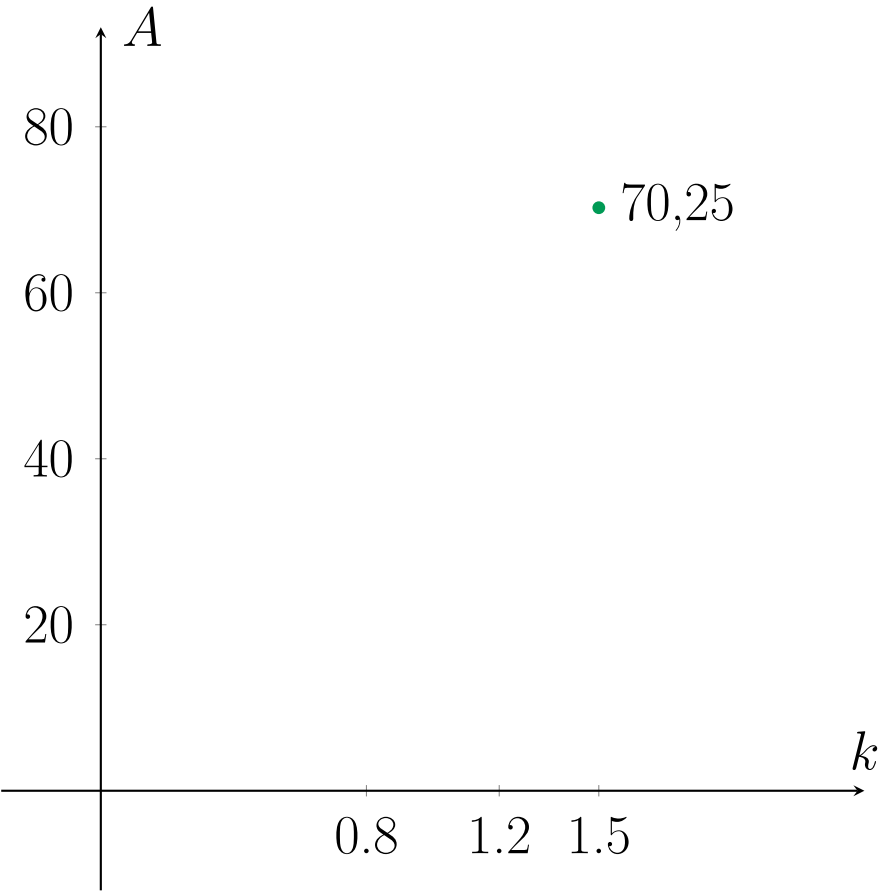
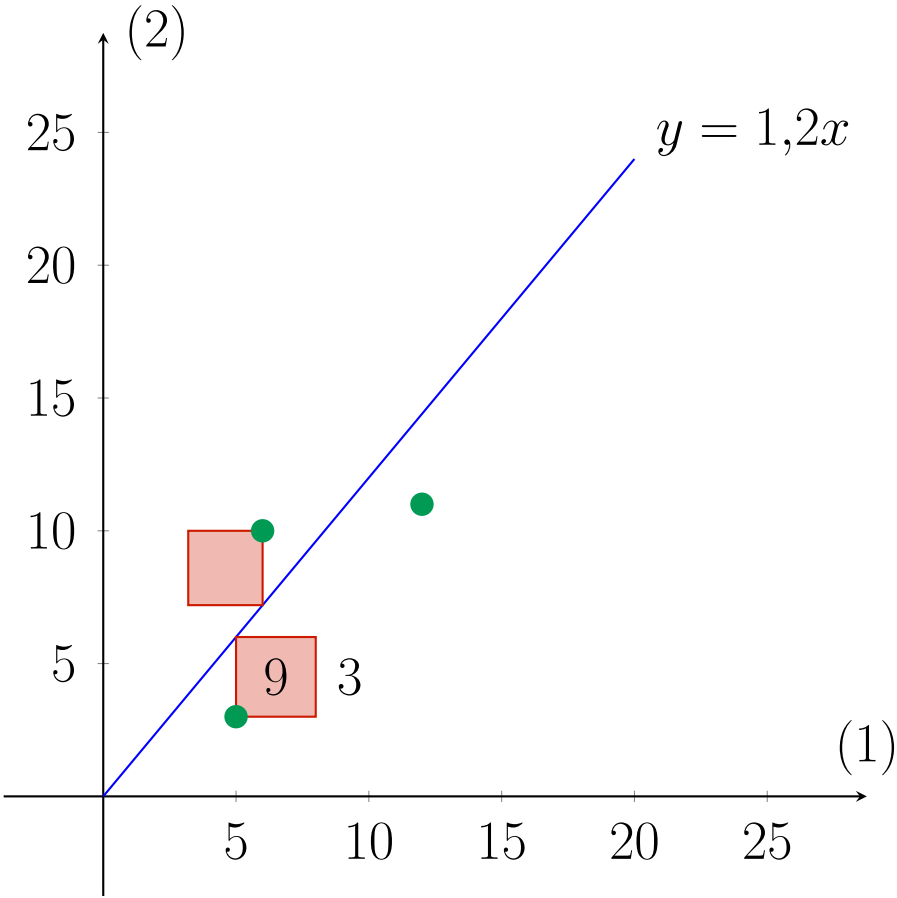
x	5	6	12
y	3	10	11



Regression

Data

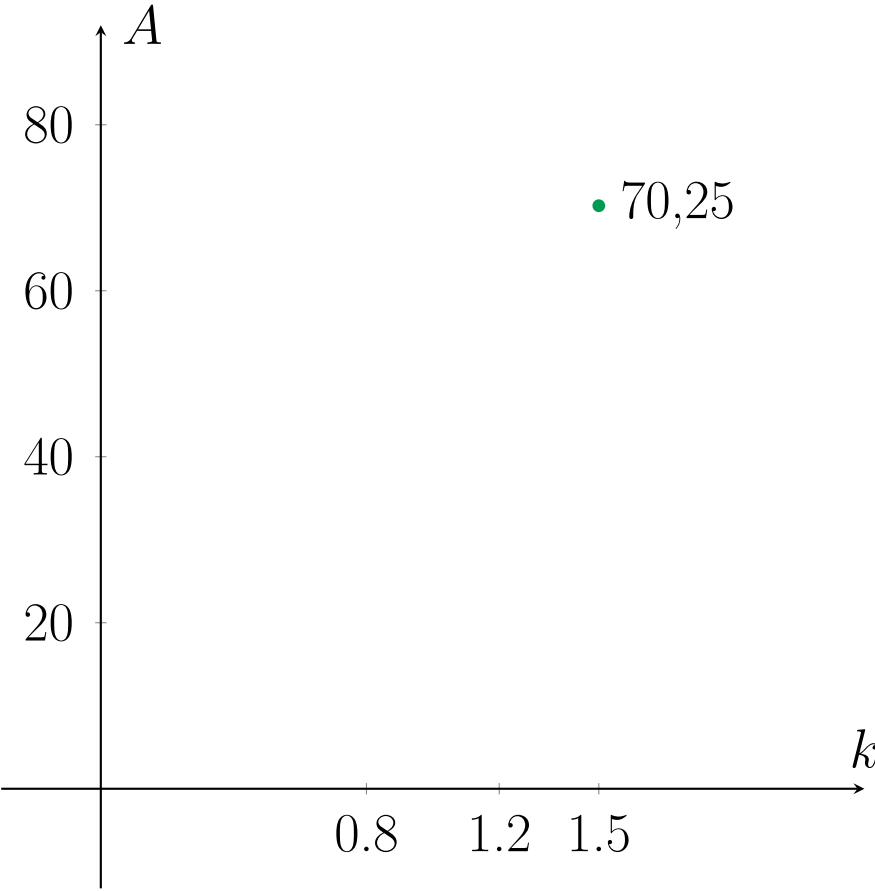
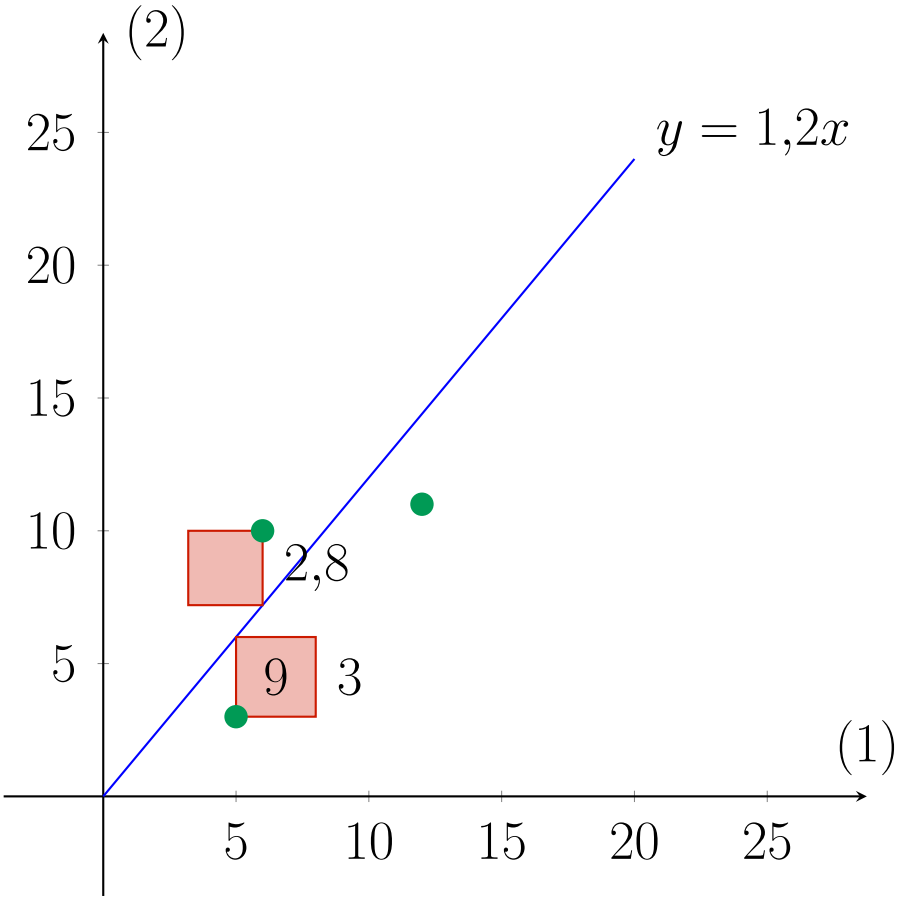
x	5	6	12
y	3	10	11



Regression

Data

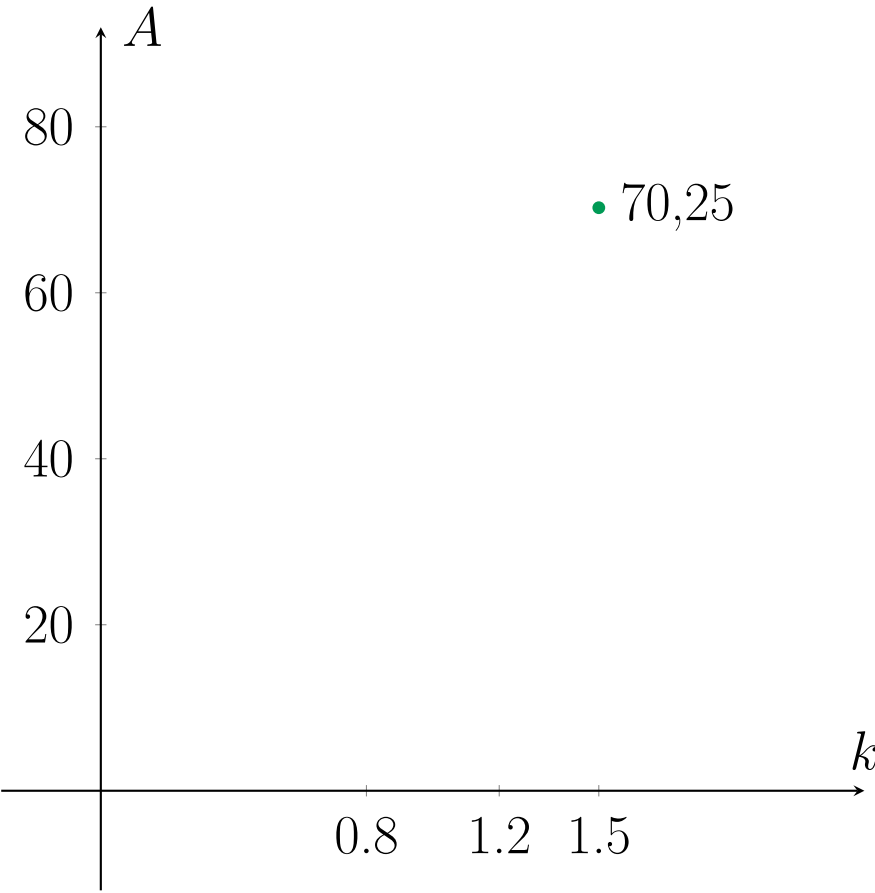
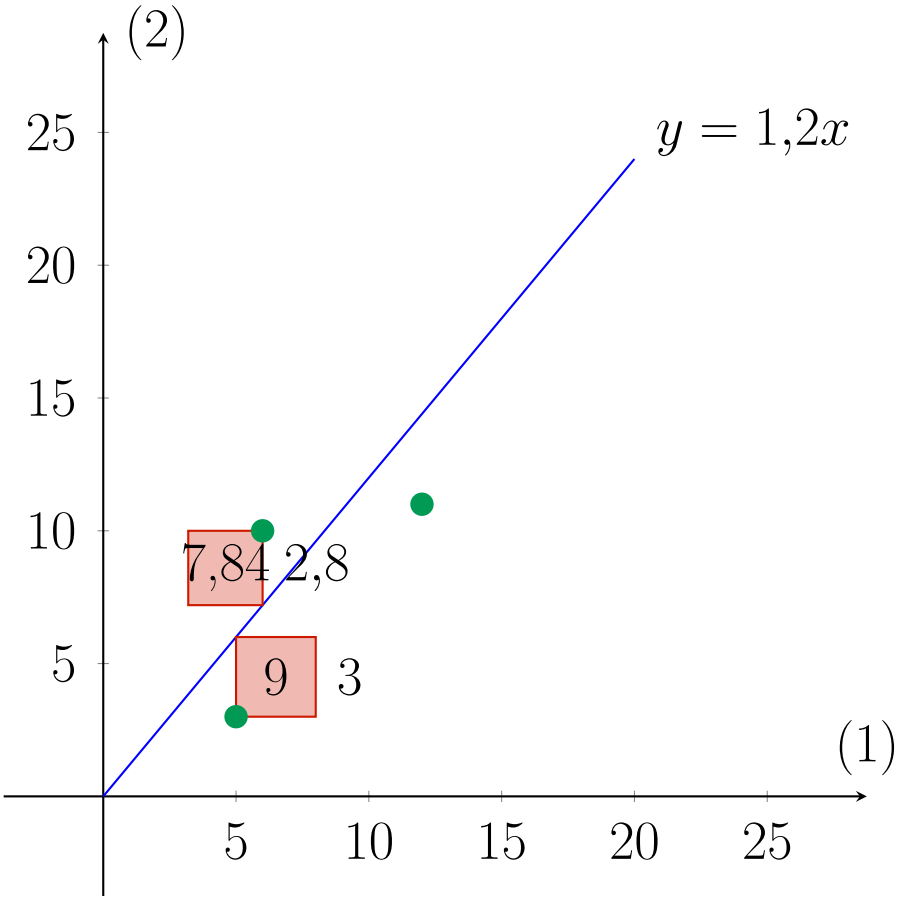
x	5	6	12
y	3	10	11



Regression

Data

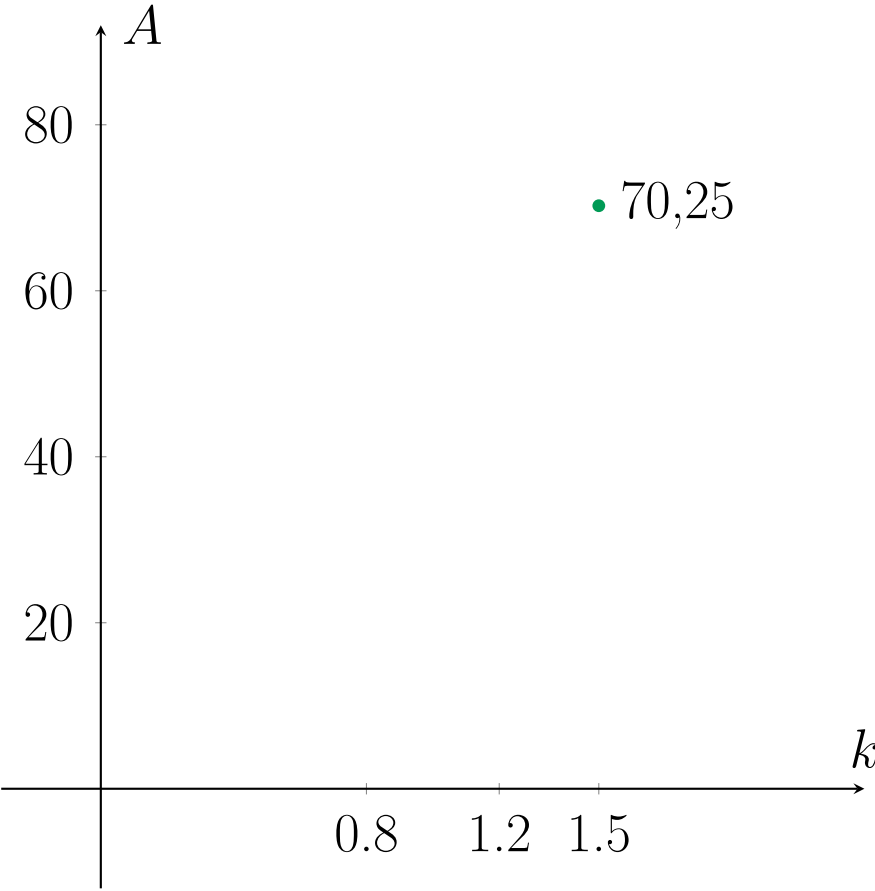
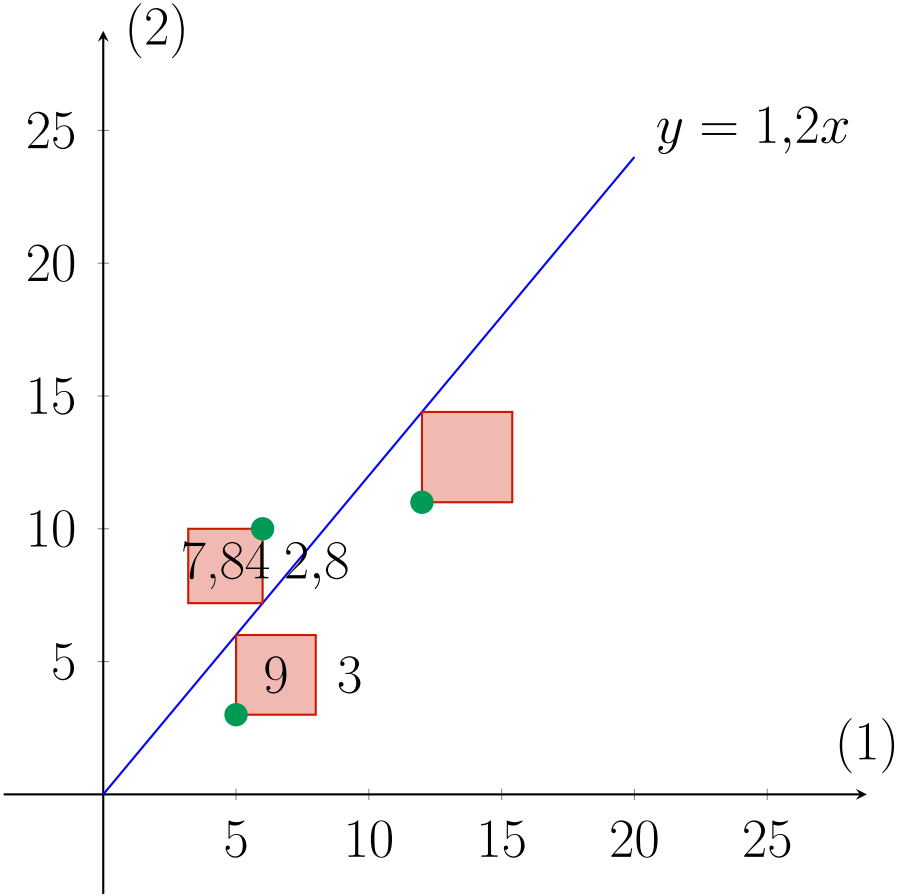
x	5	6	12
y	3	10	11



Regression

Data

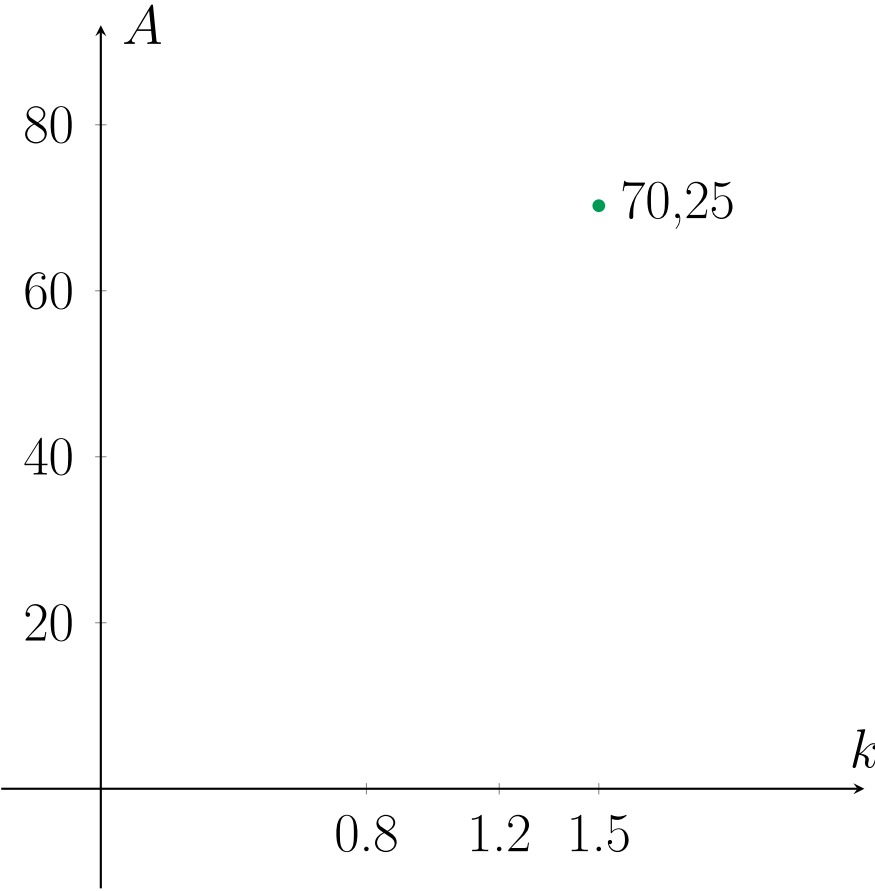
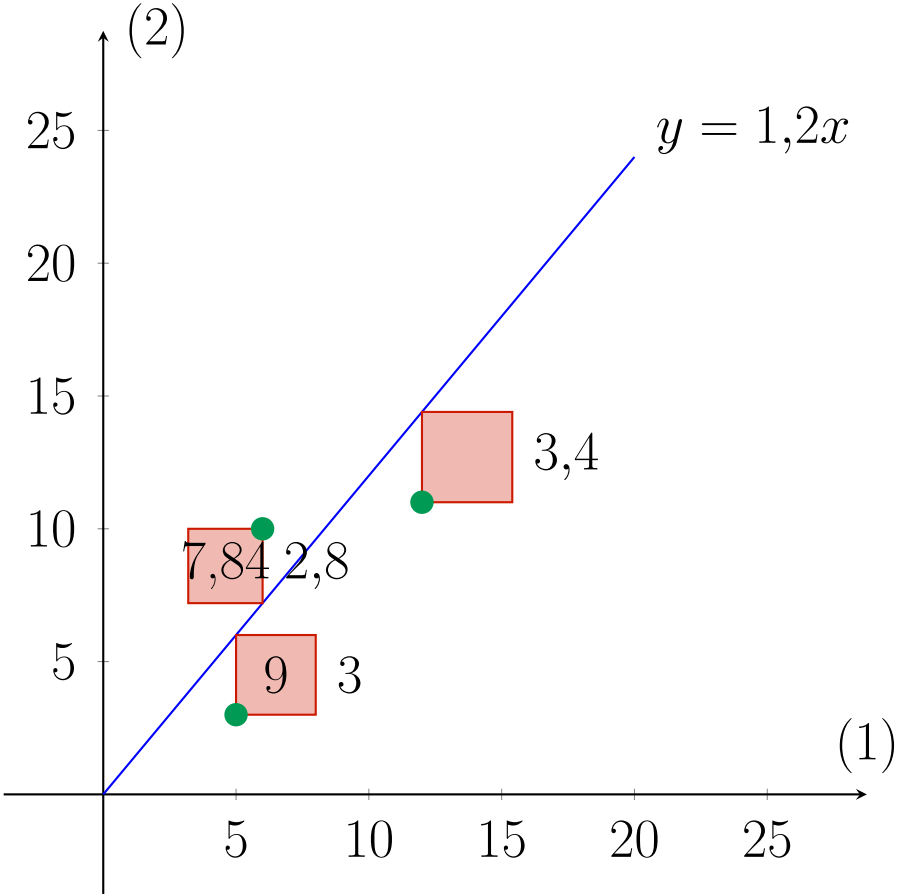
x	5	6	12
y	3	10	11



Regression

Data

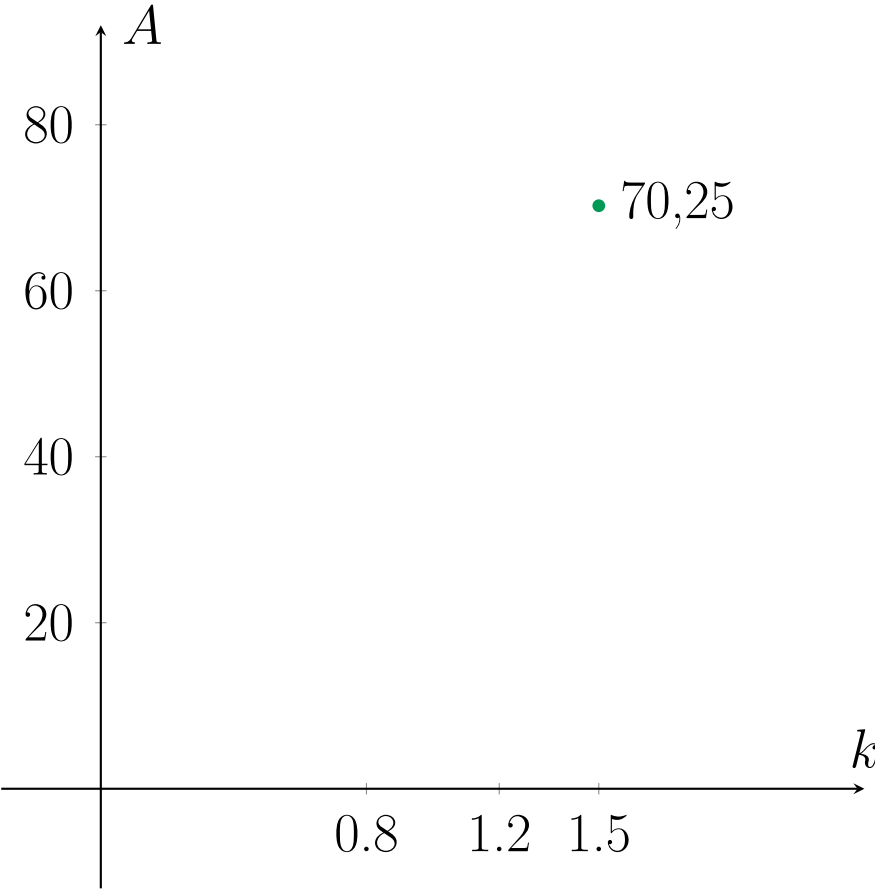
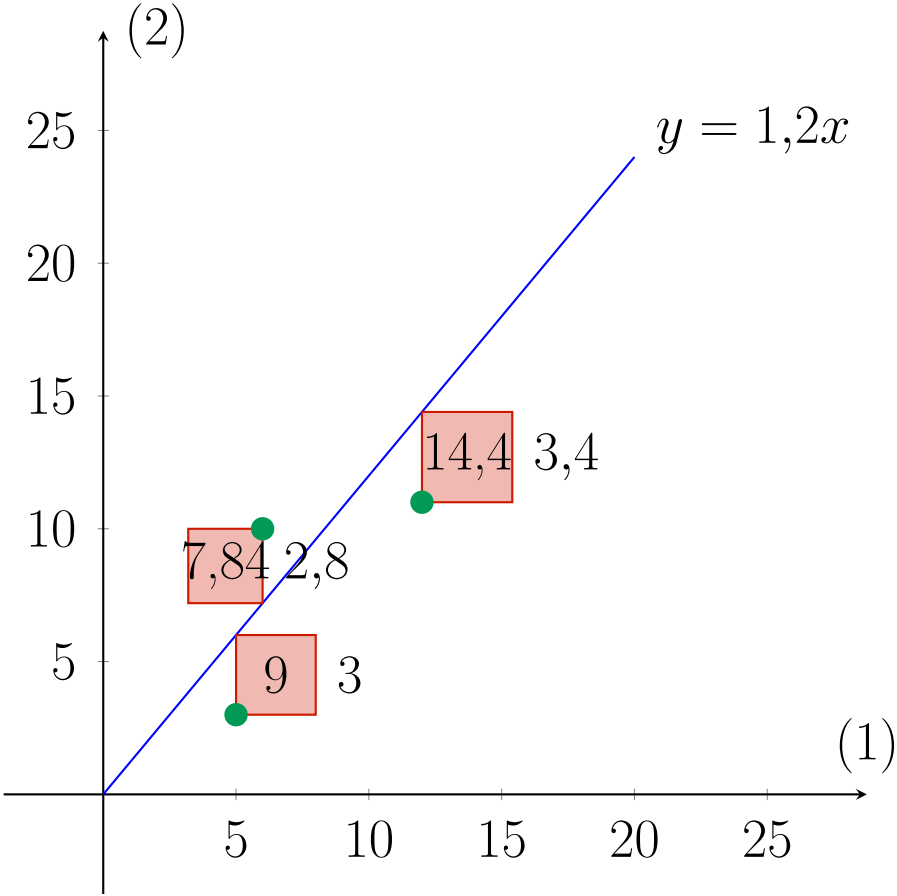
x	5	6	12
y	3	10	11



Regression

Data

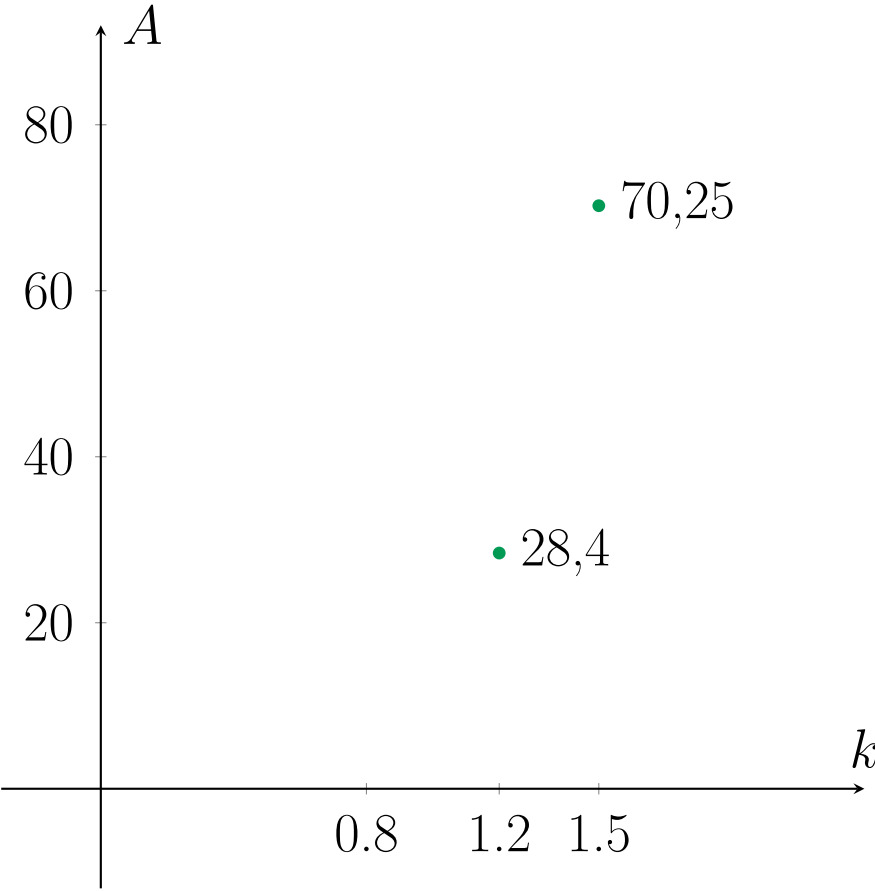
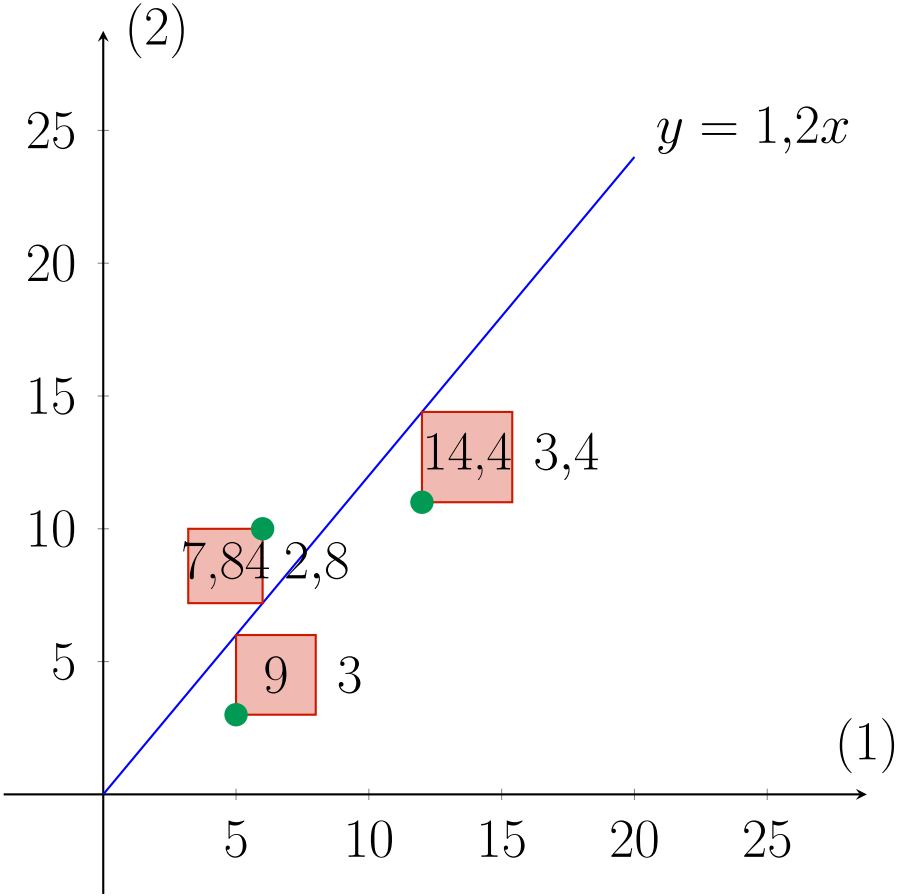
x	5	6	12
y	3	10	11



Regression

Data

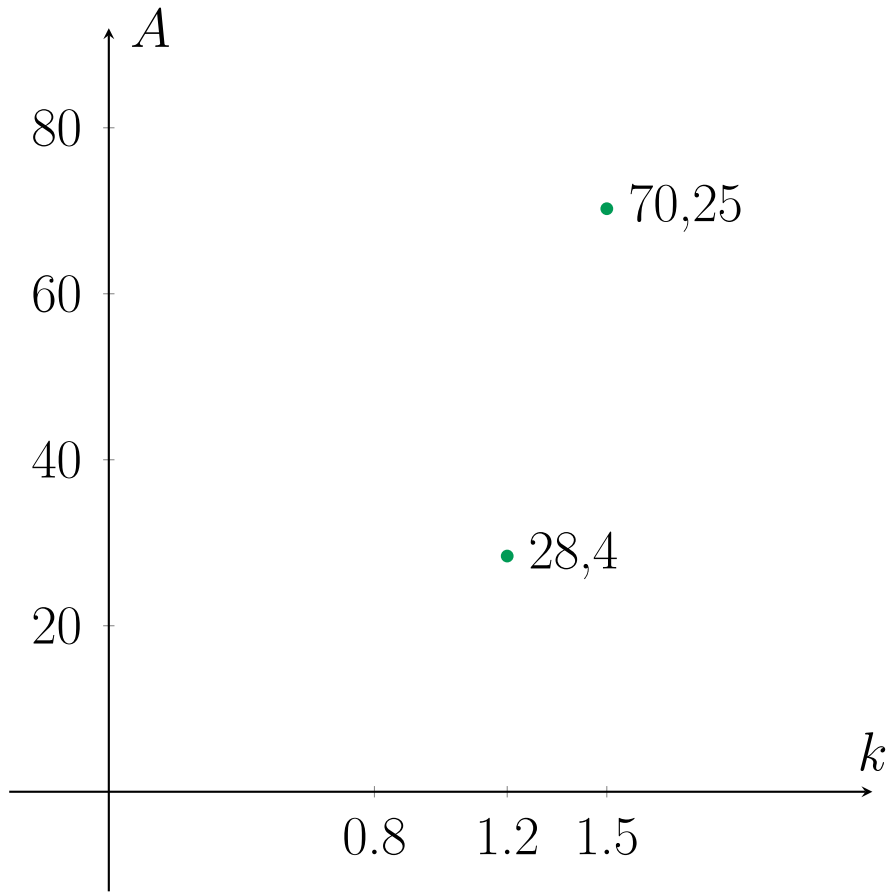
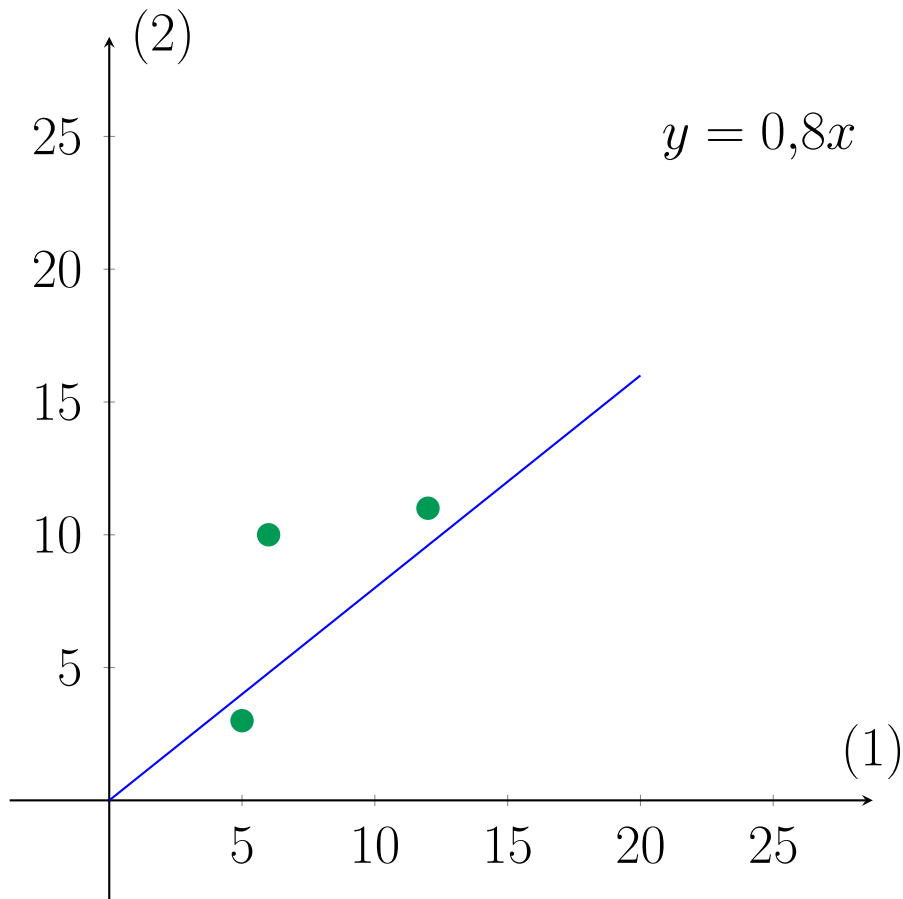
x	5	6	12
y	3	10	11



Regression

Data

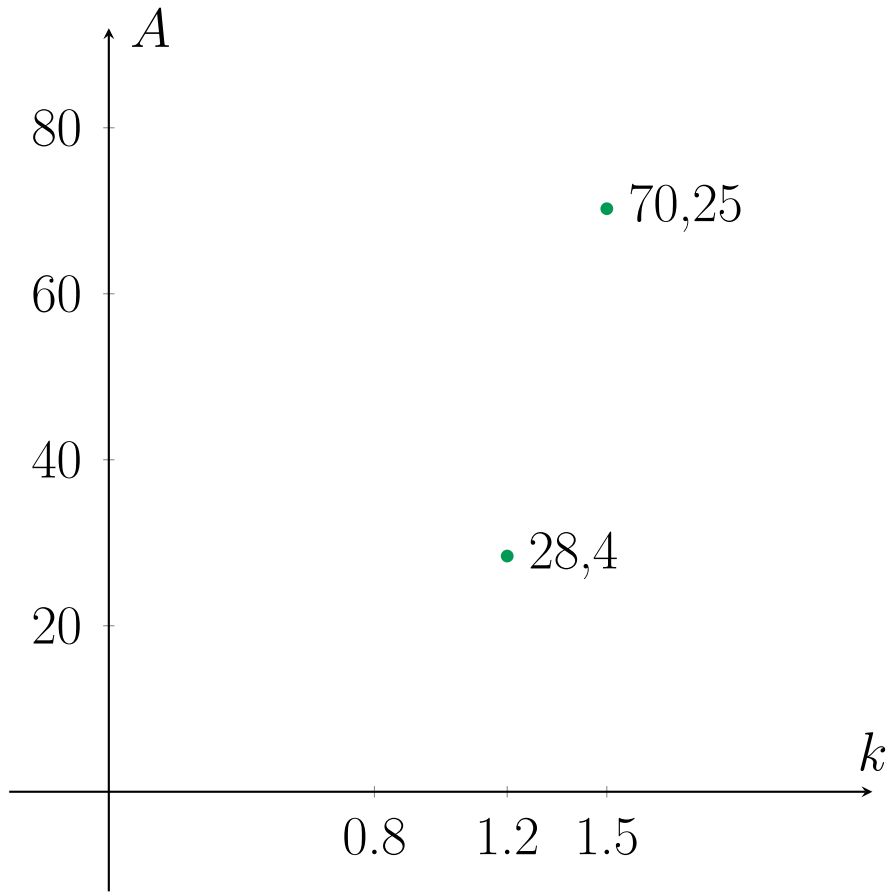
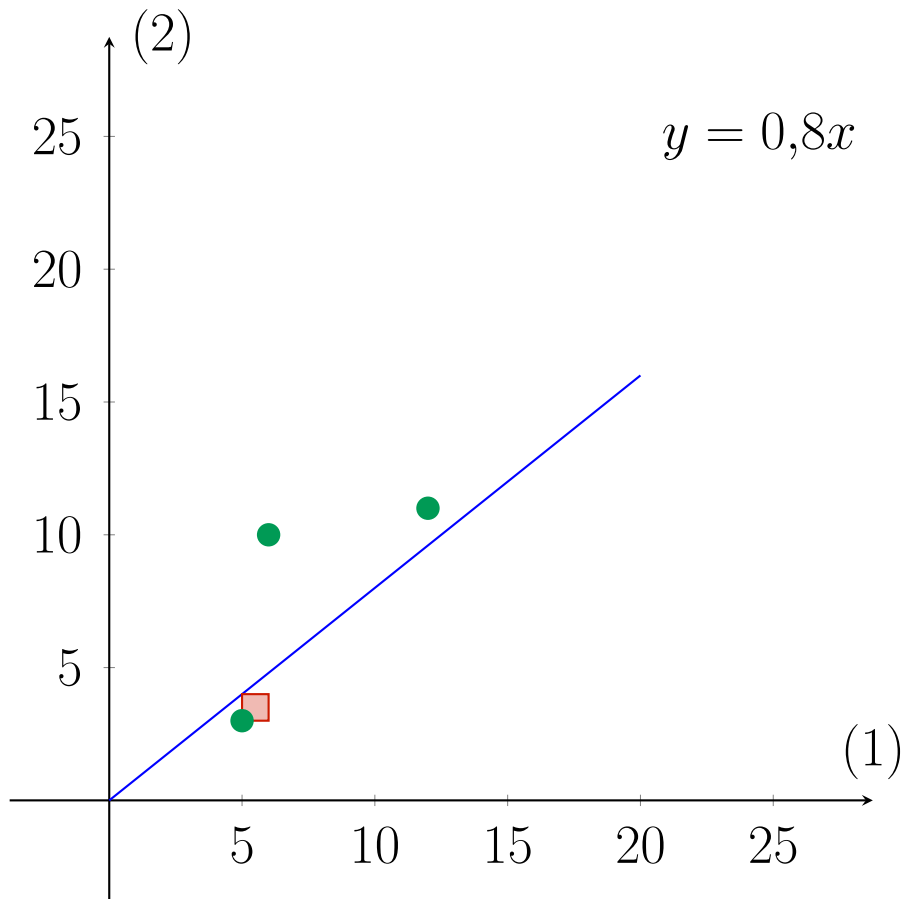
x	5	6	12
y	3	10	11



Regression

Data

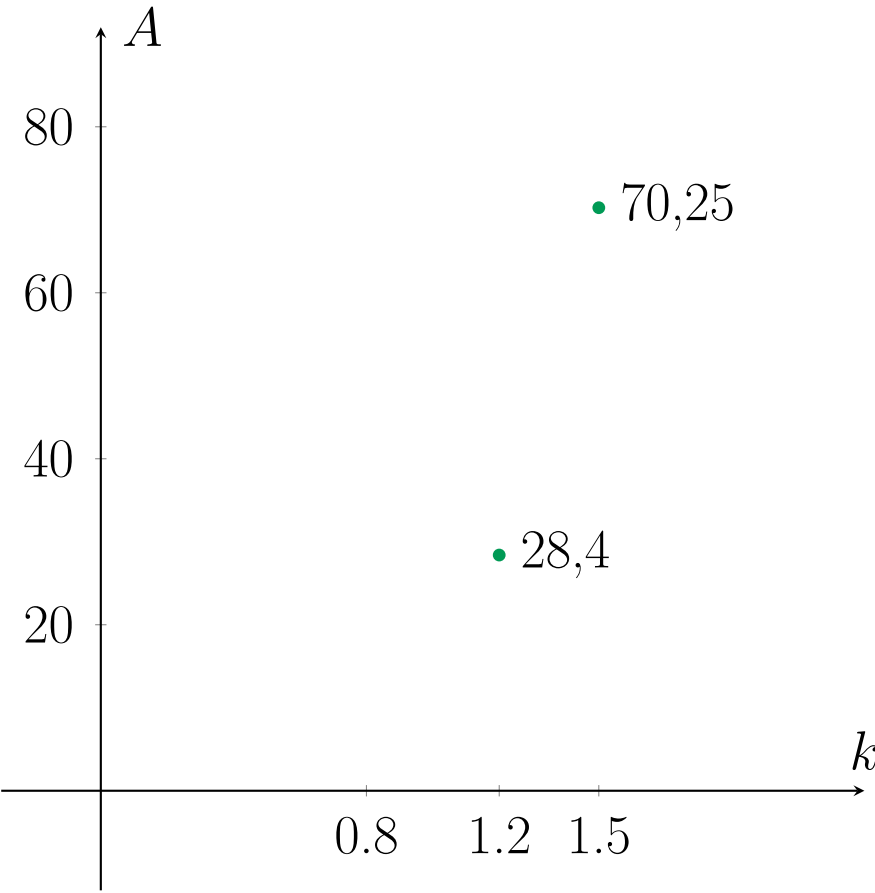
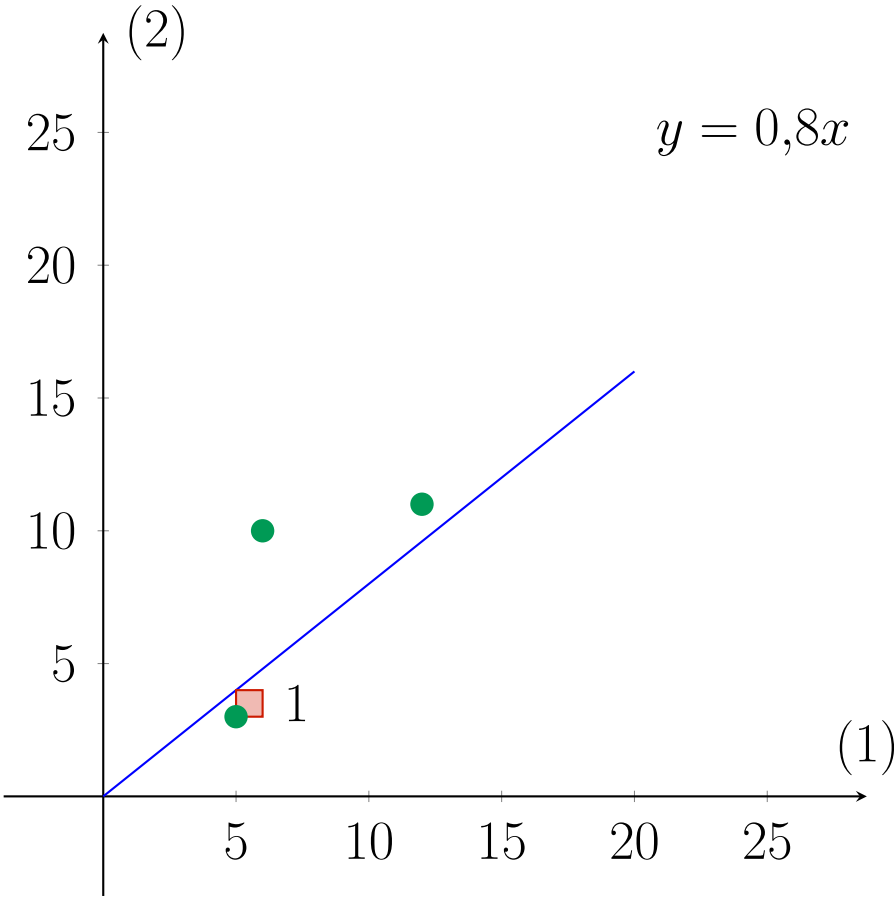
x	5	6	12
y	3	10	11



Regression

Data

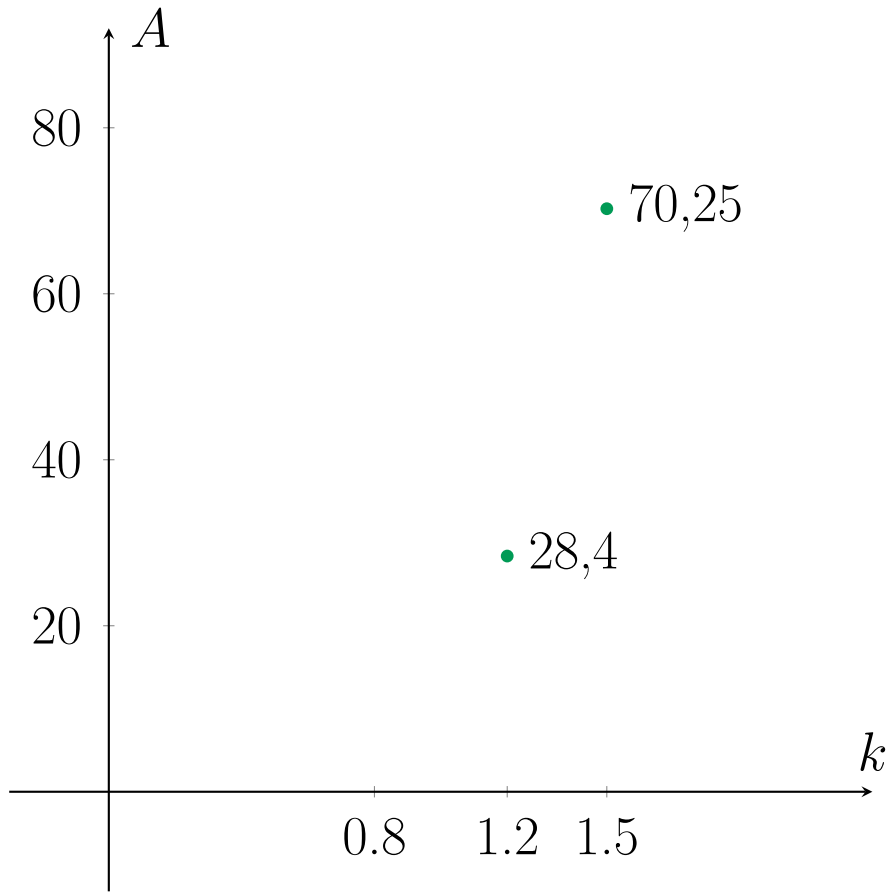
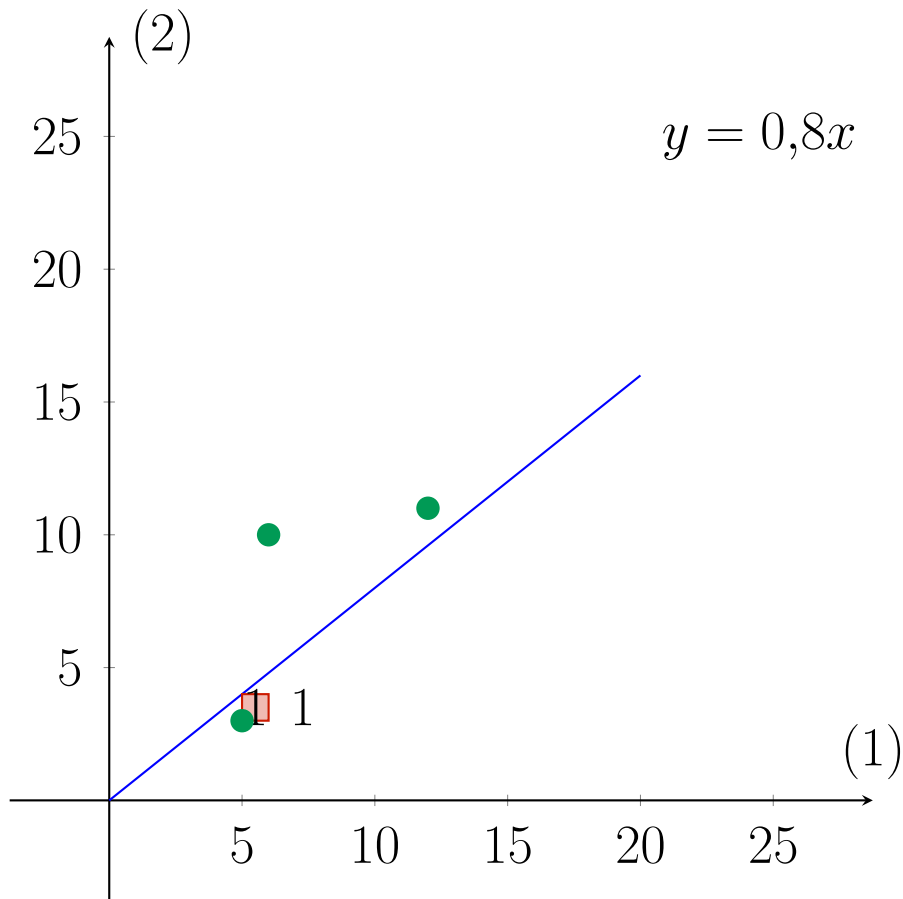
x	5	6	12
y	3	10	11



Regression

Data

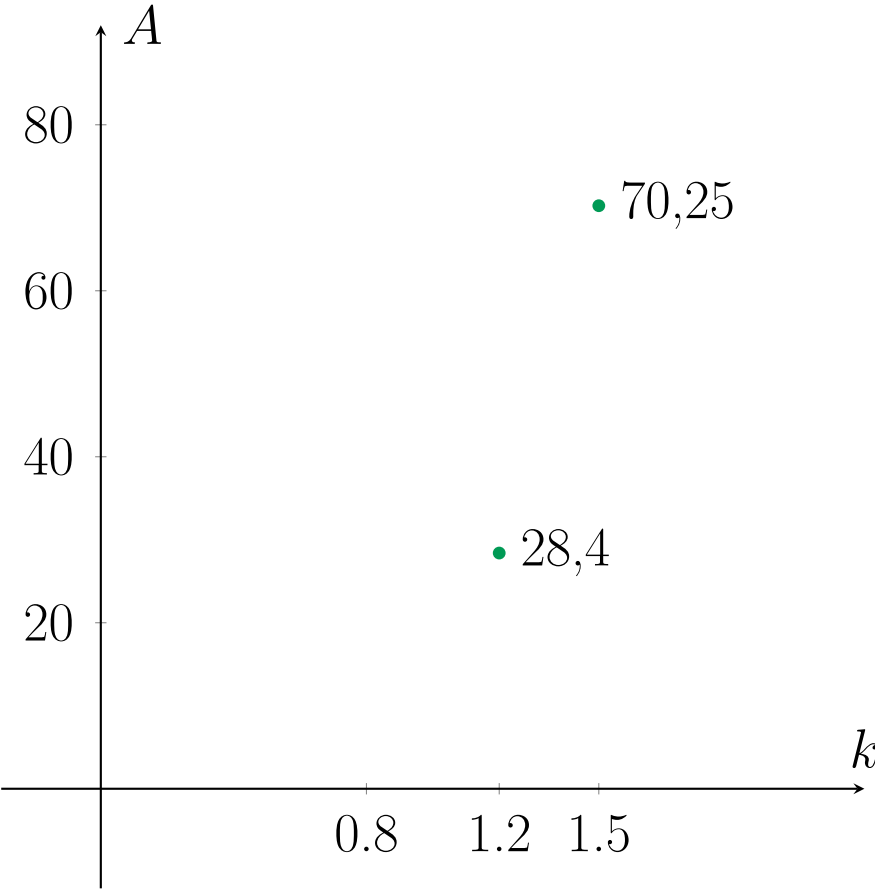
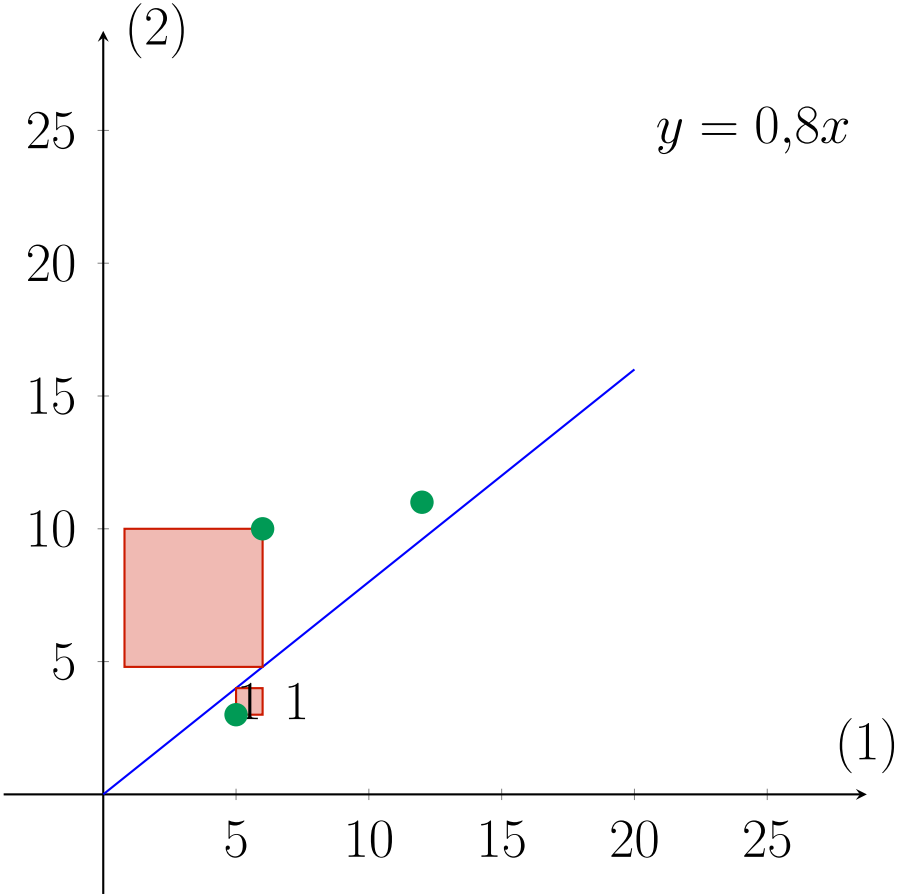
x	5	6	12
y	3	10	11



Regression

Data

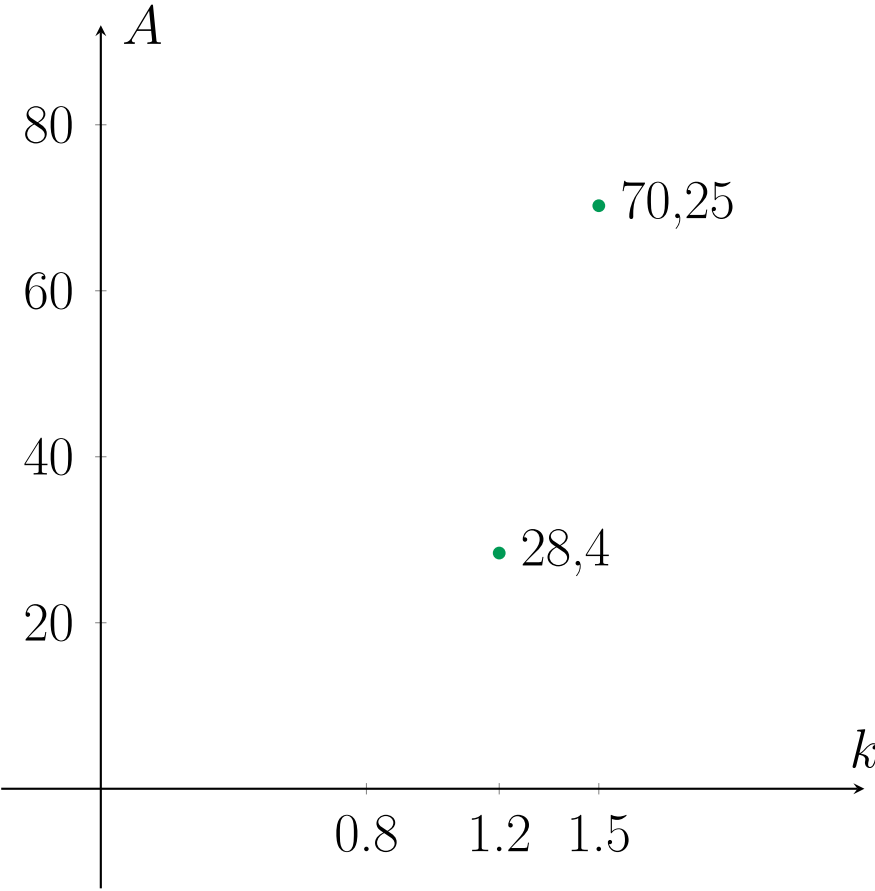
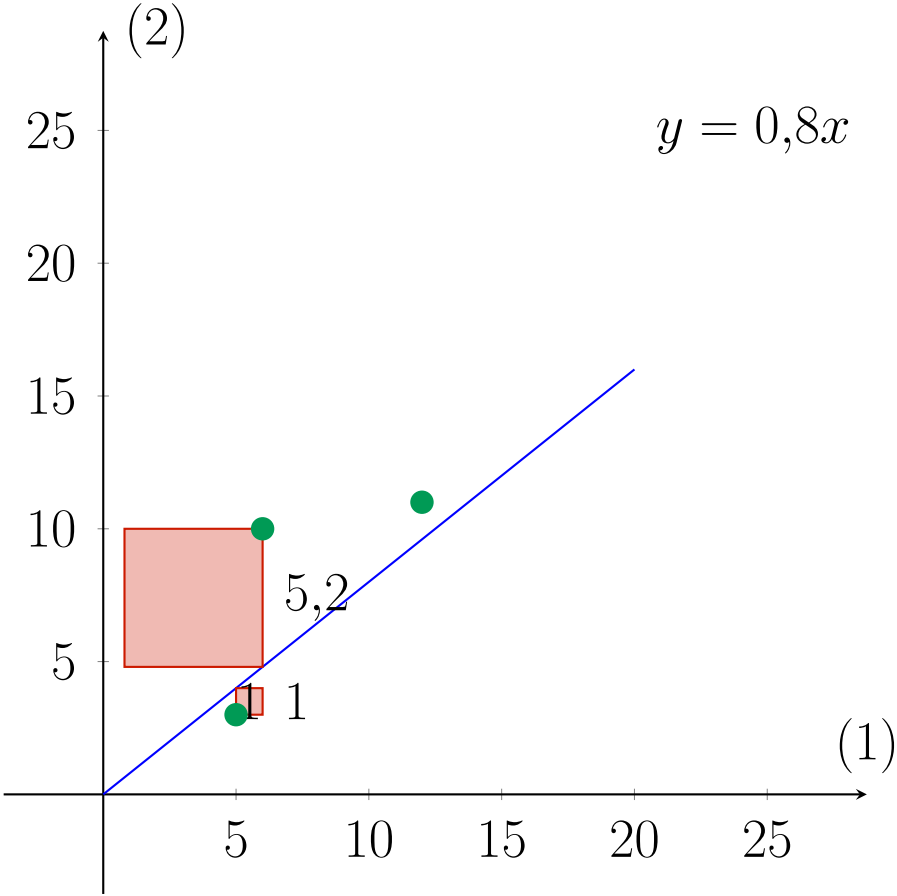
x	5	6	12
y	3	10	11



Regression

Data

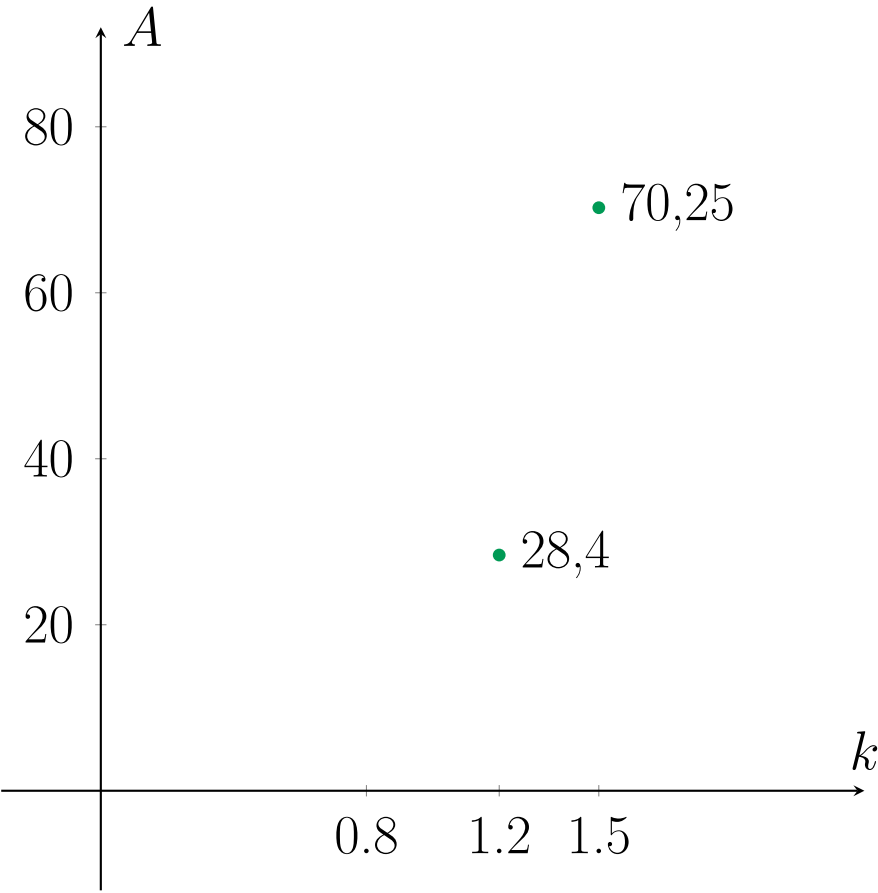
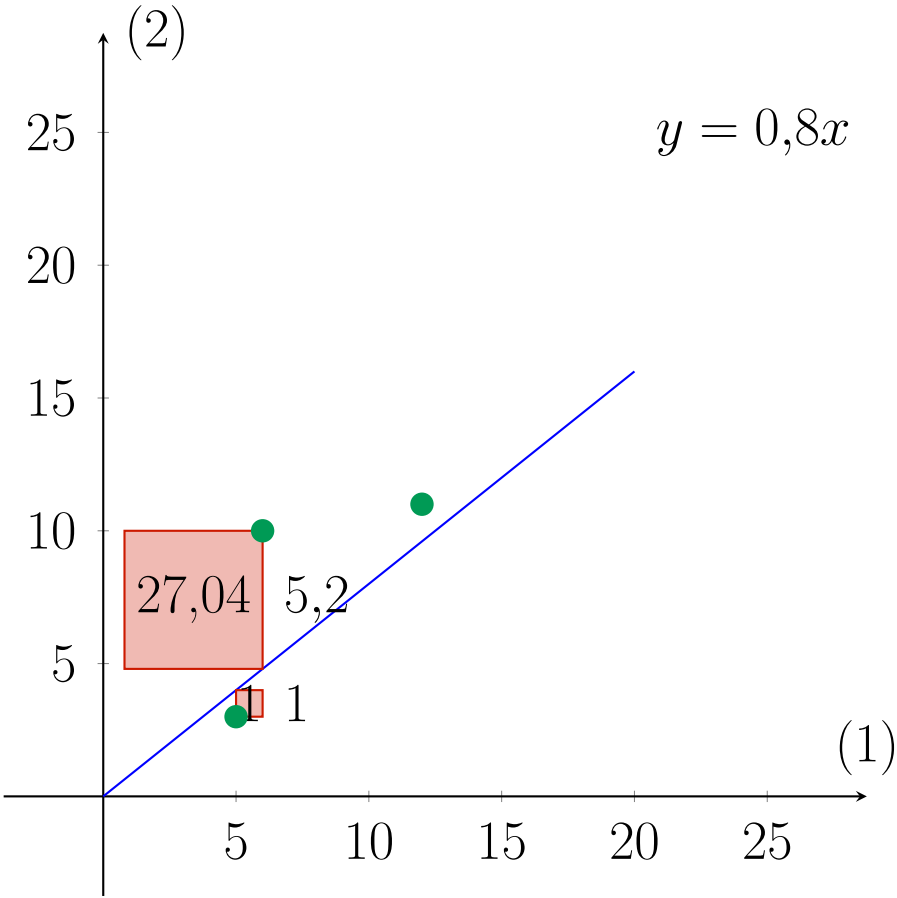
x	5	6	12
y	3	10	11



Regression

Data

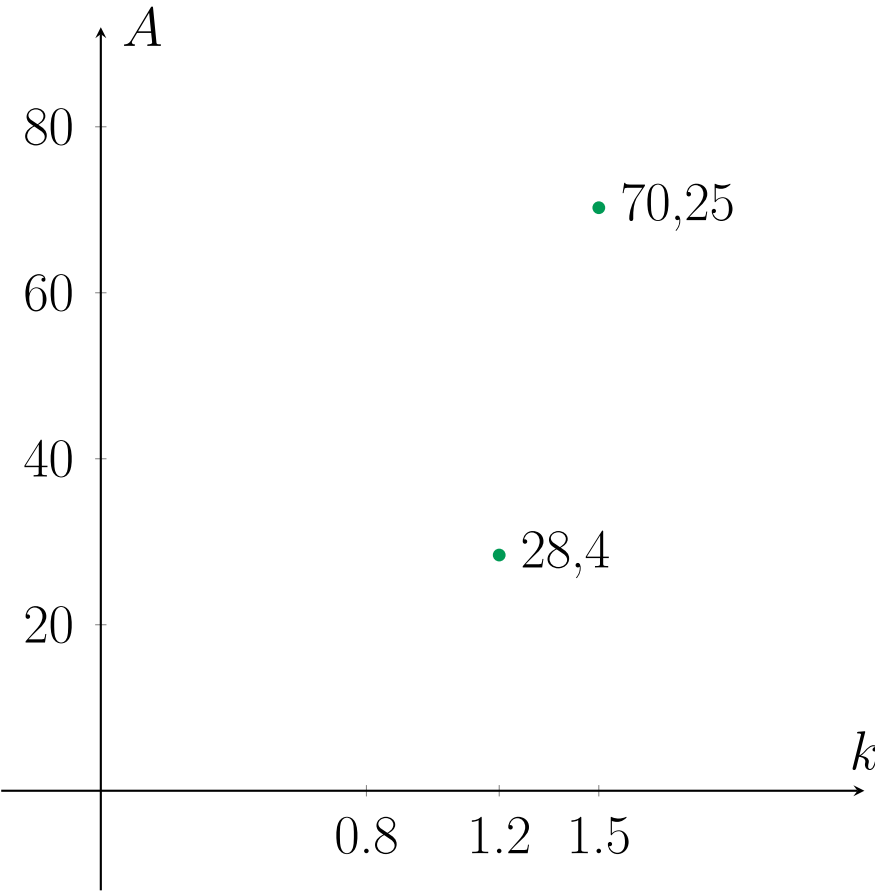
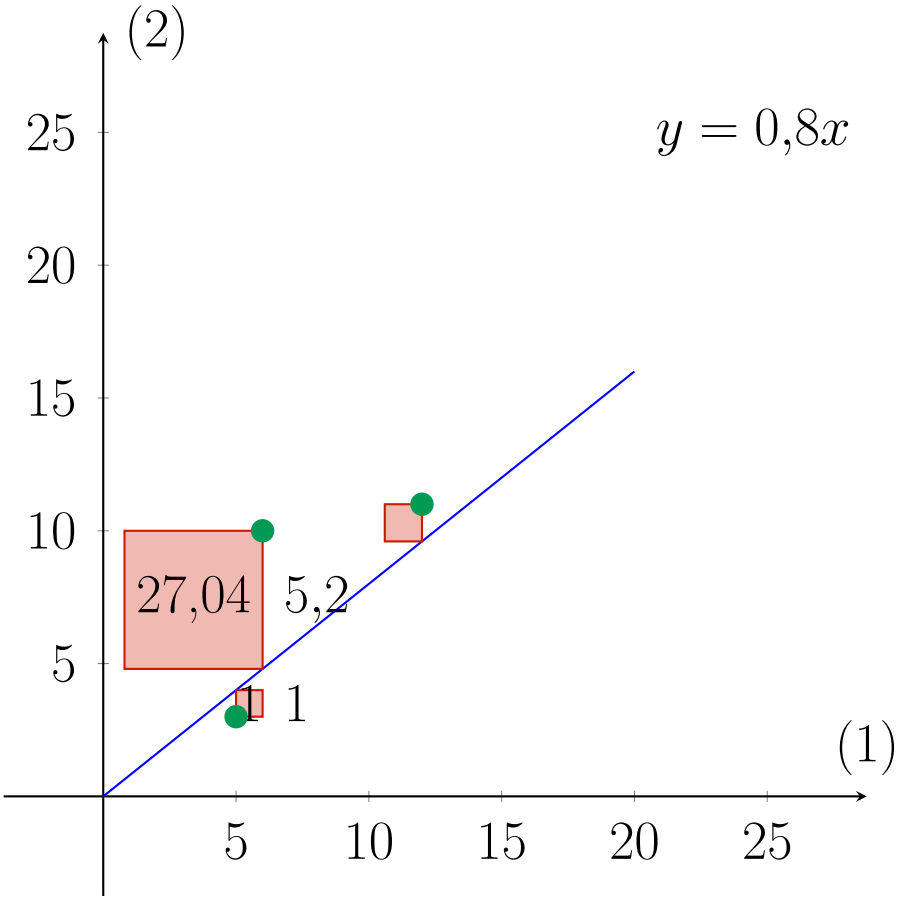
x	5	6	12
y	3	10	11



Regression

Data

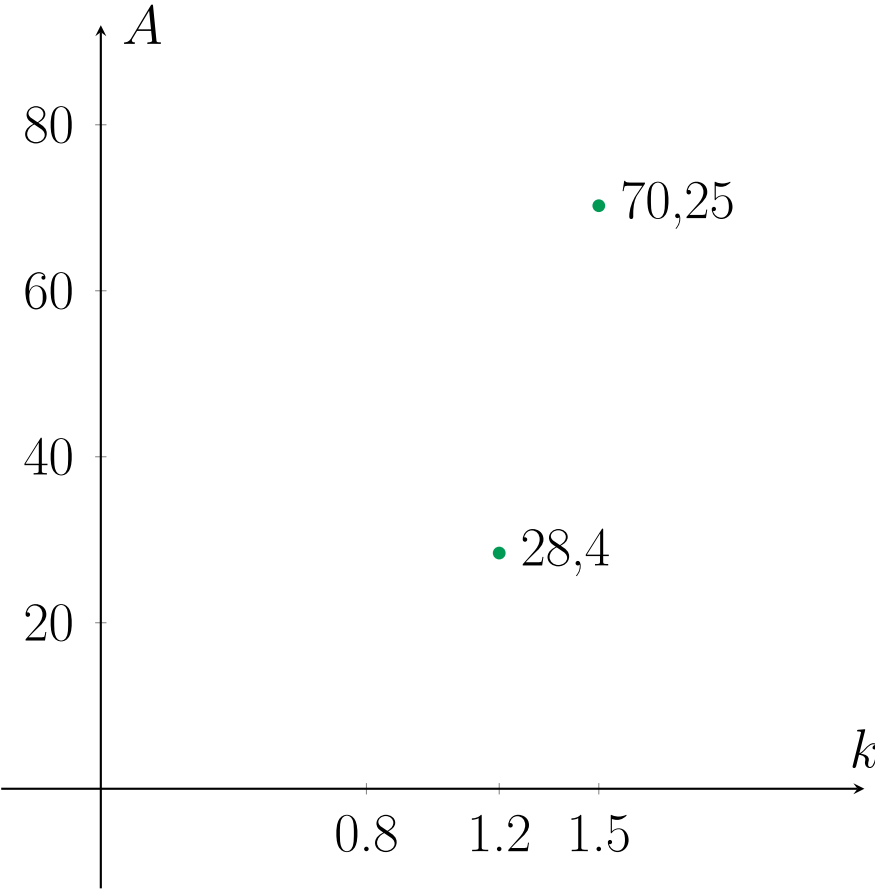
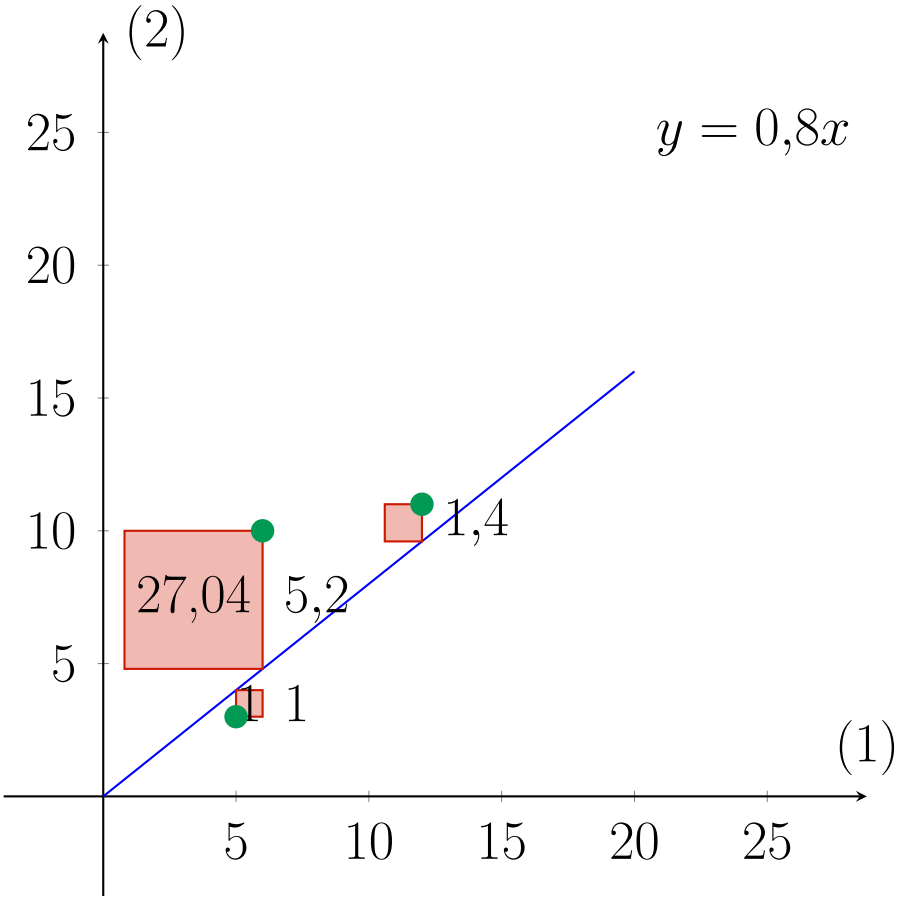
x	5	6	12
y	3	10	11



Regression

Data

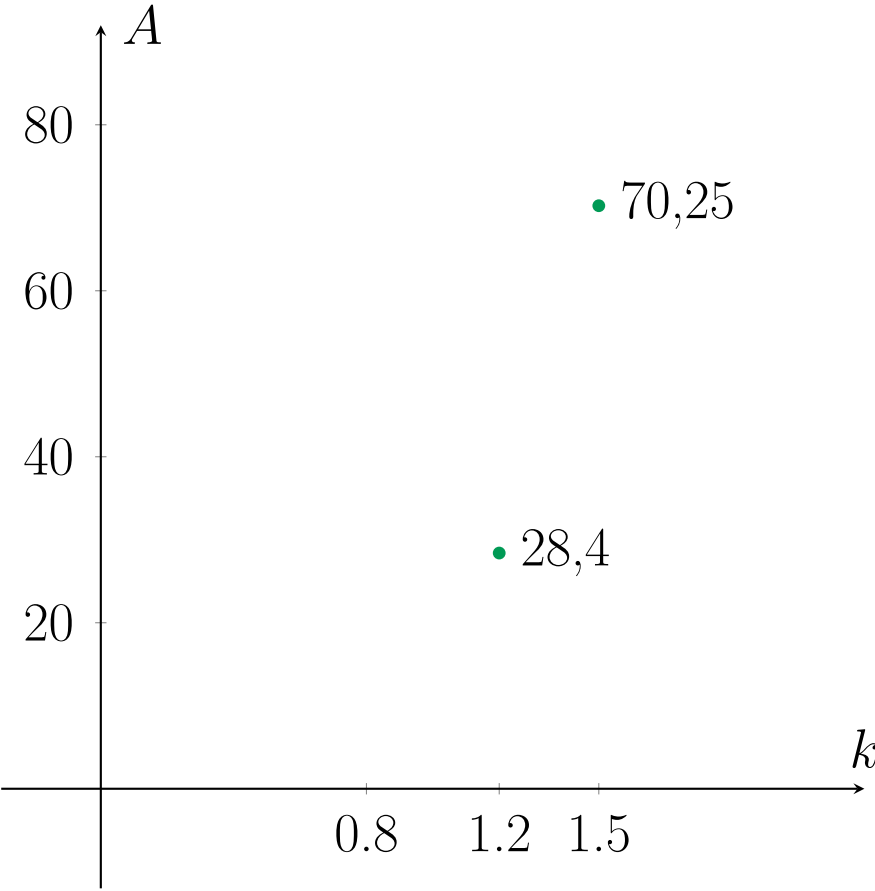
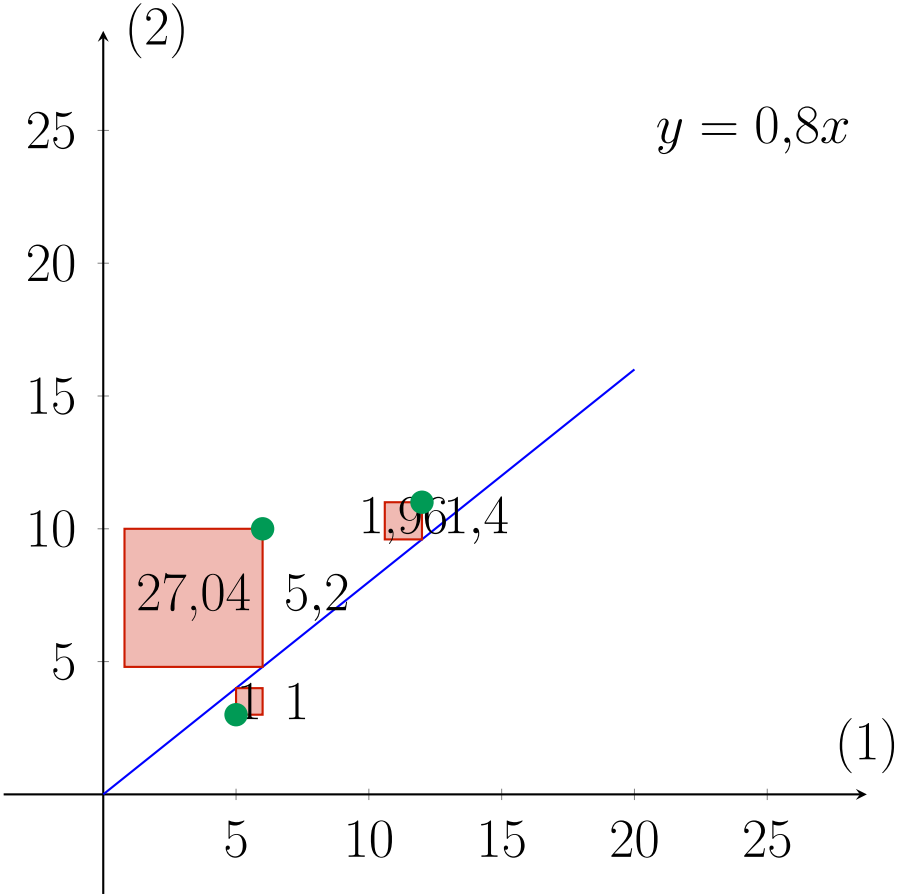
x	5	6	12
y	3	10	11



Regression

Data

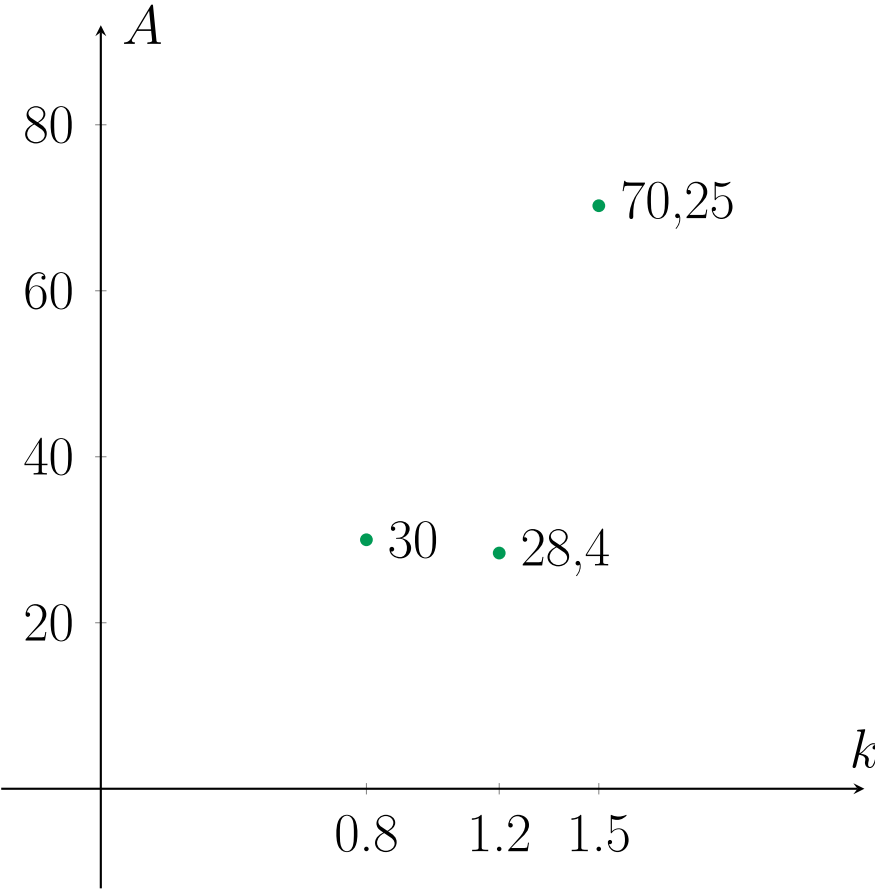
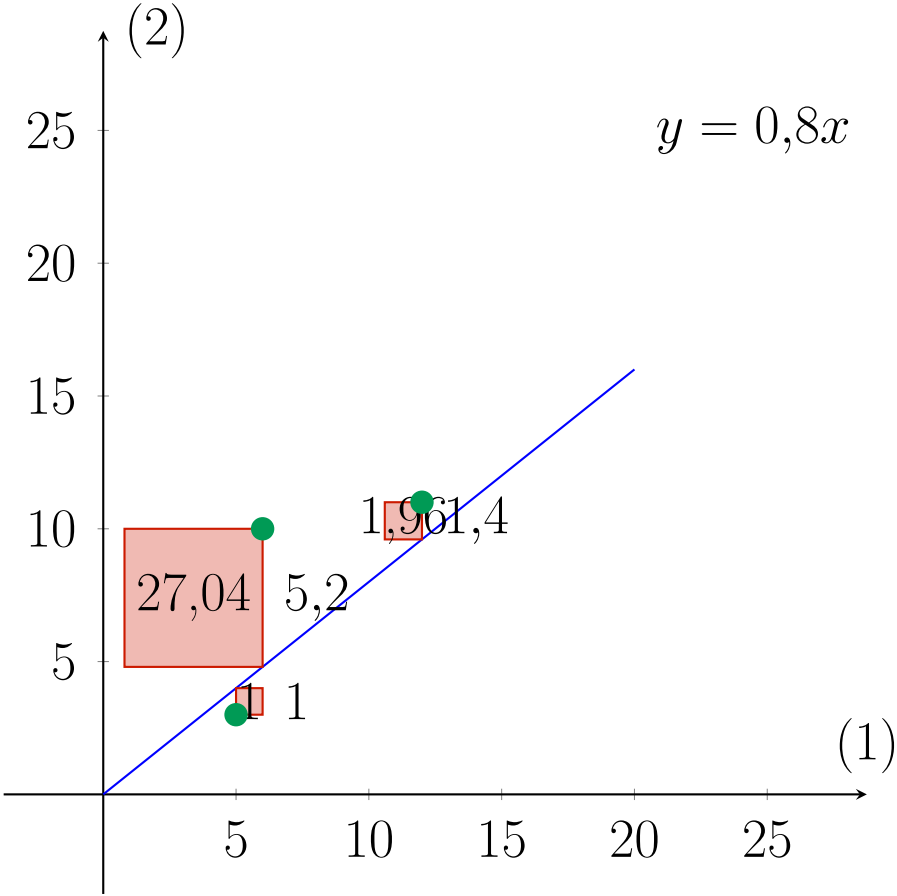
x	5	6	12
y	3	10	11



Regression

Data

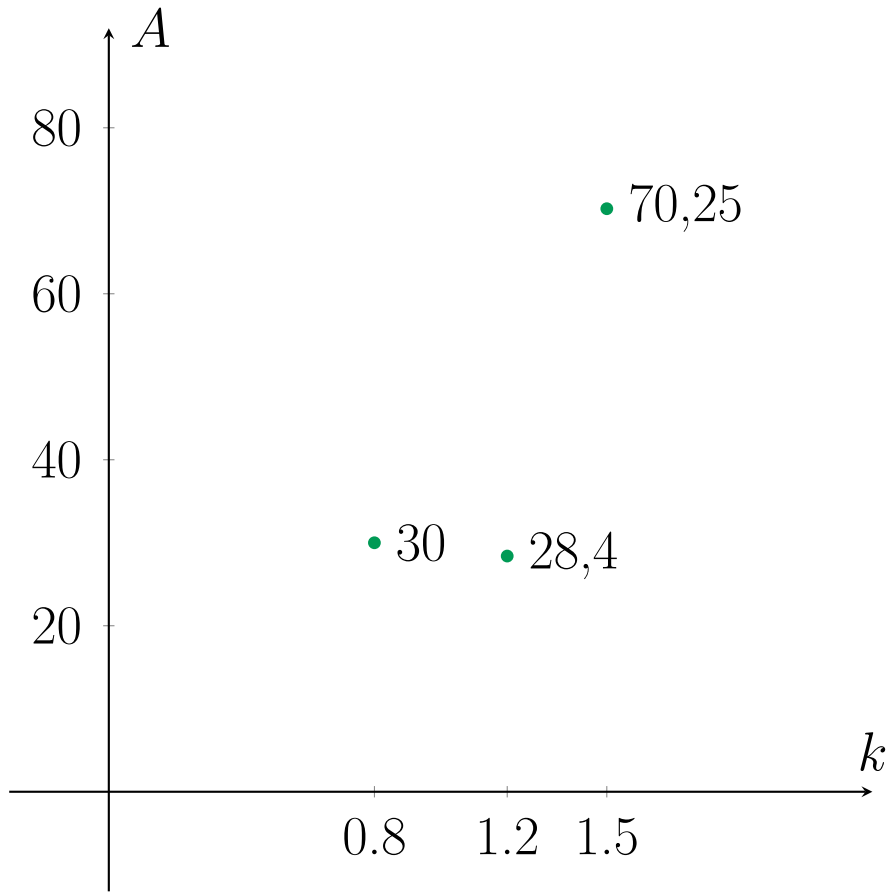
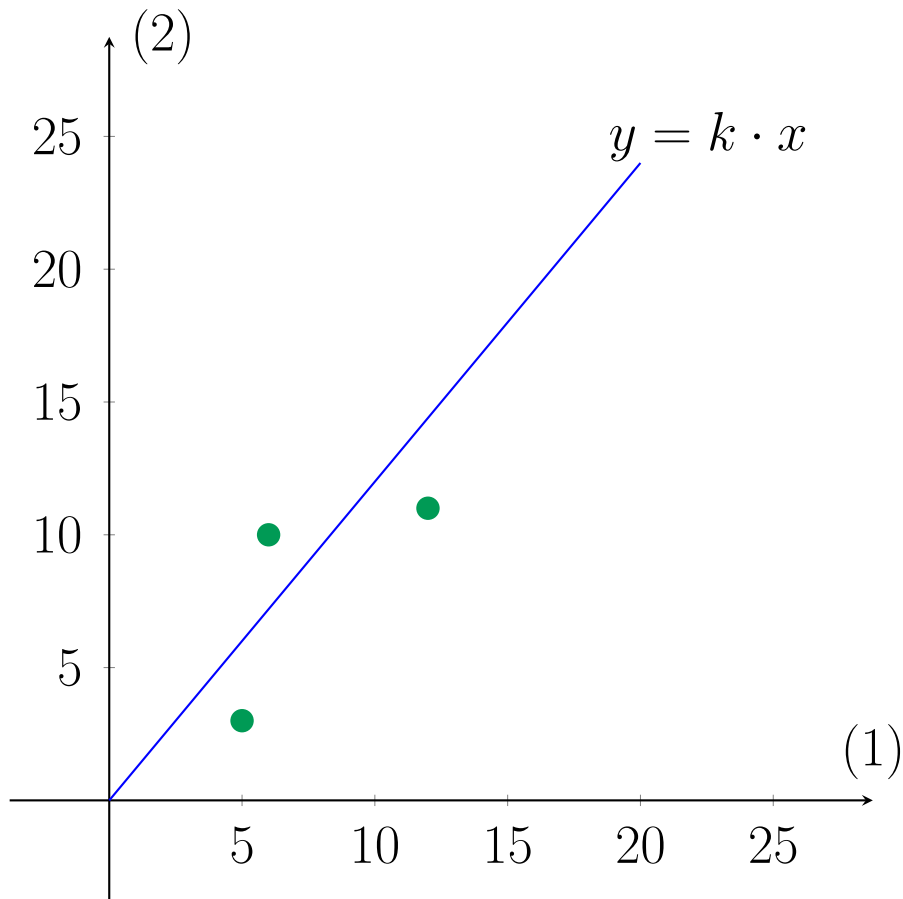
x	5	6	12
y	3	10	11



Regression

Data

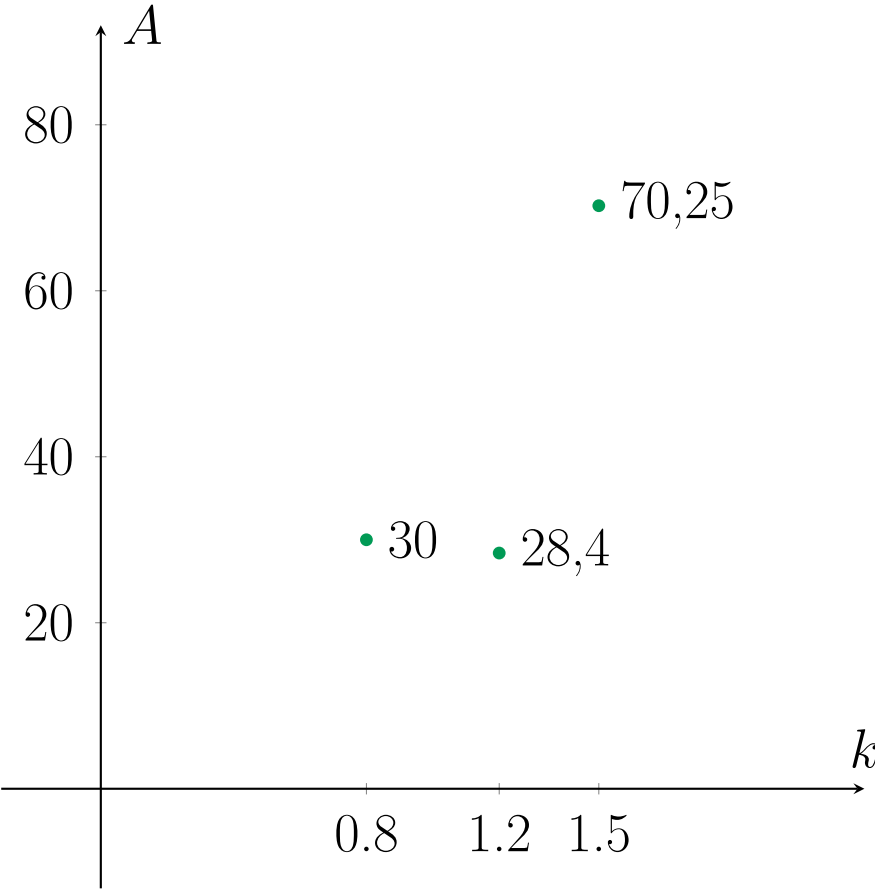
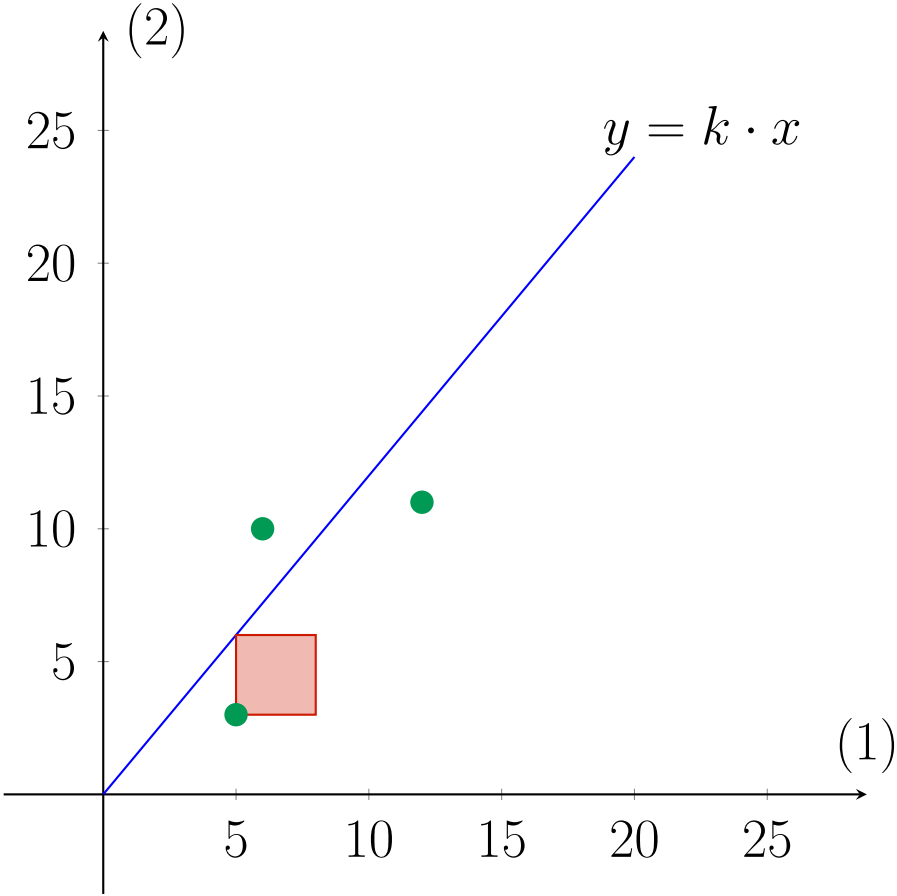
x	5	6	12
y	3	10	11



Regression

Data

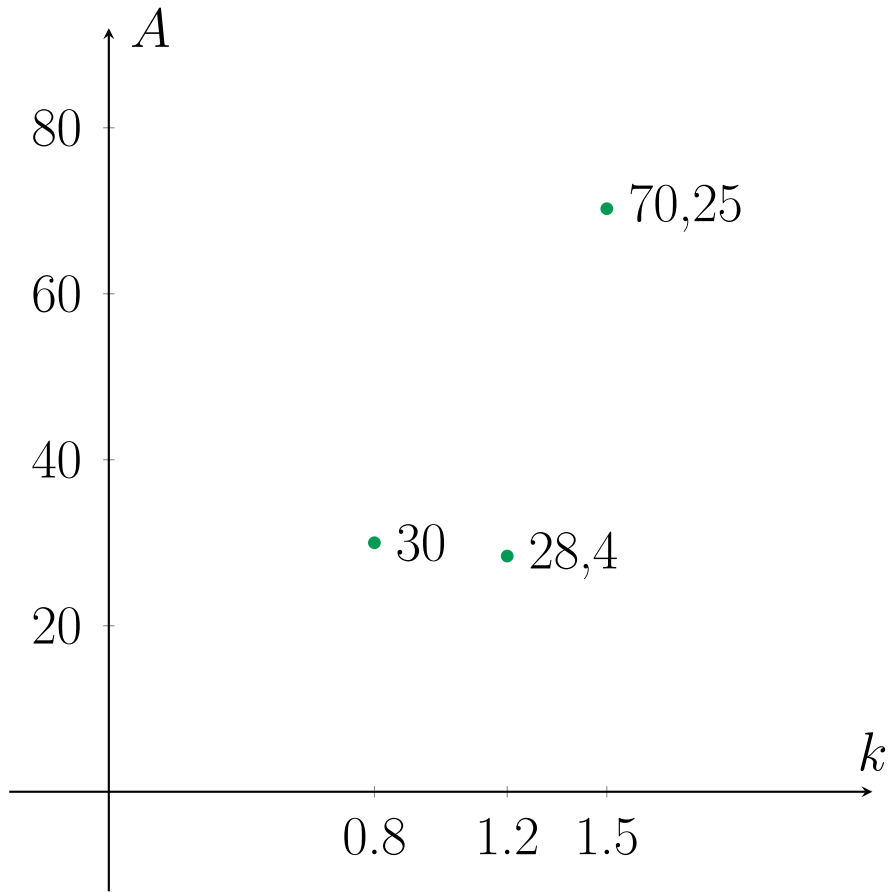
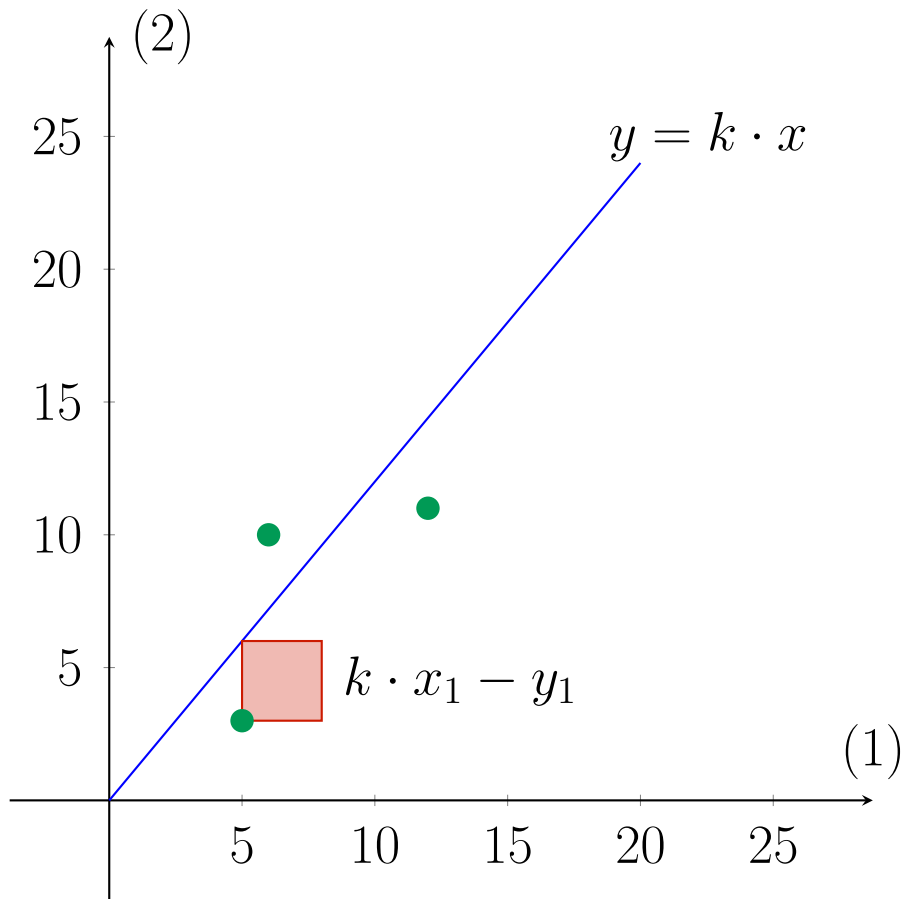
x	5	6	12
y	3	10	11



Regression

Data

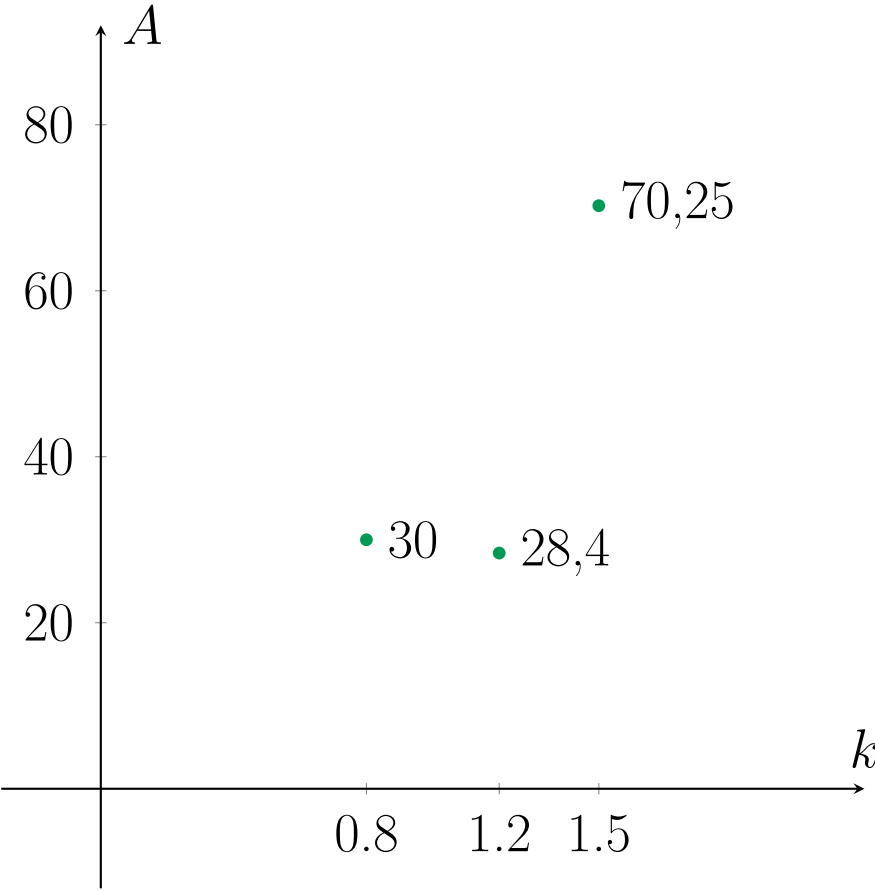
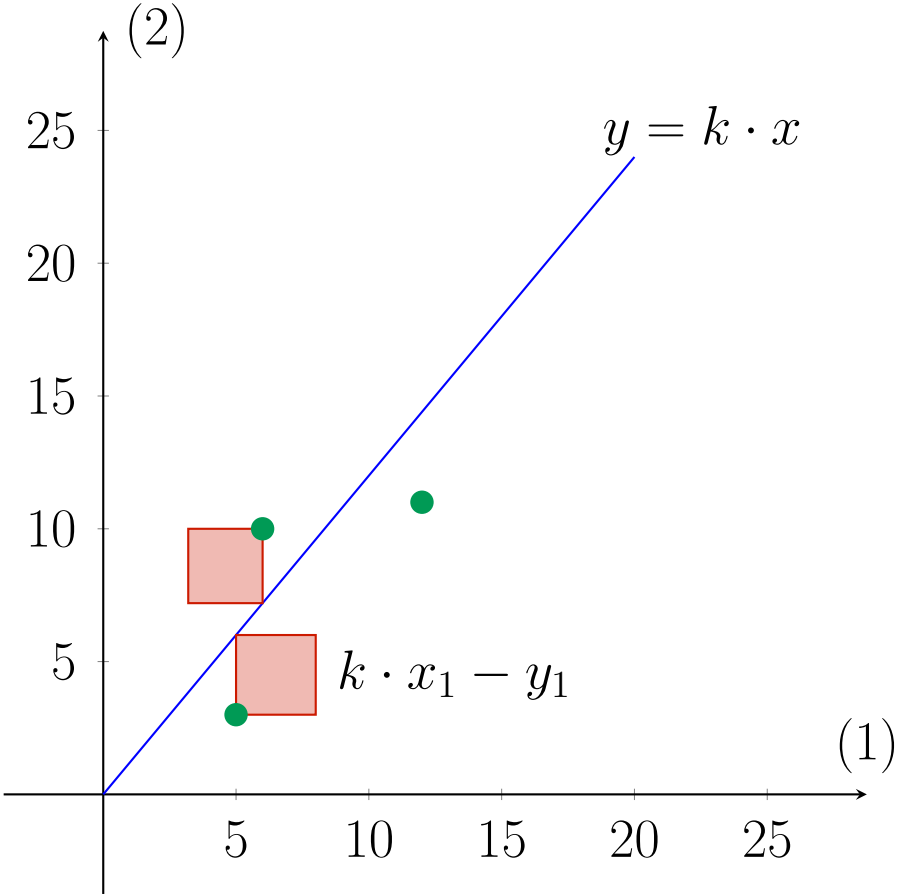
x	5	6	12
y	3	10	11



Regression

Data

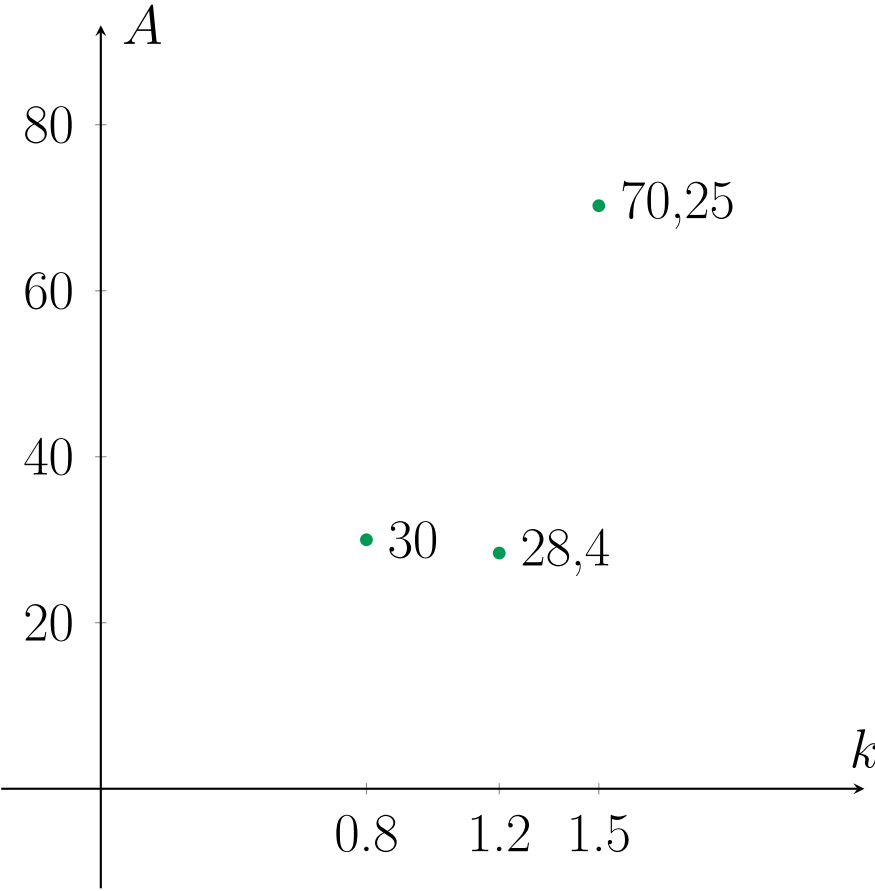
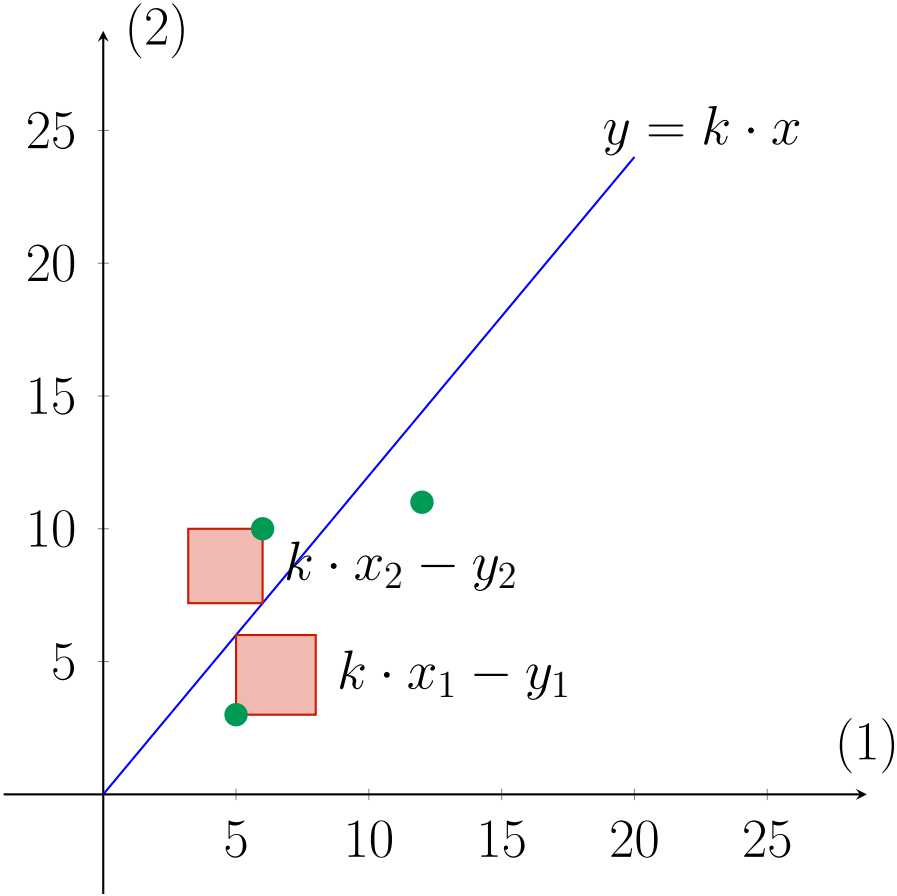
x	5	6	12
y	3	10	11



Regression

Data

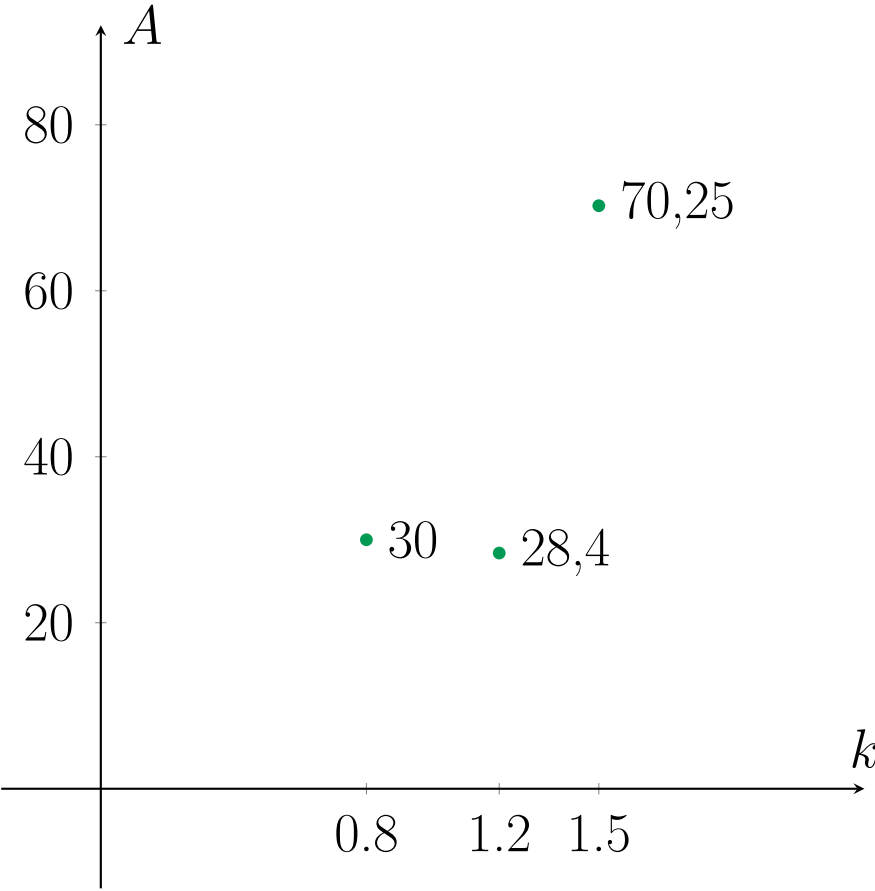
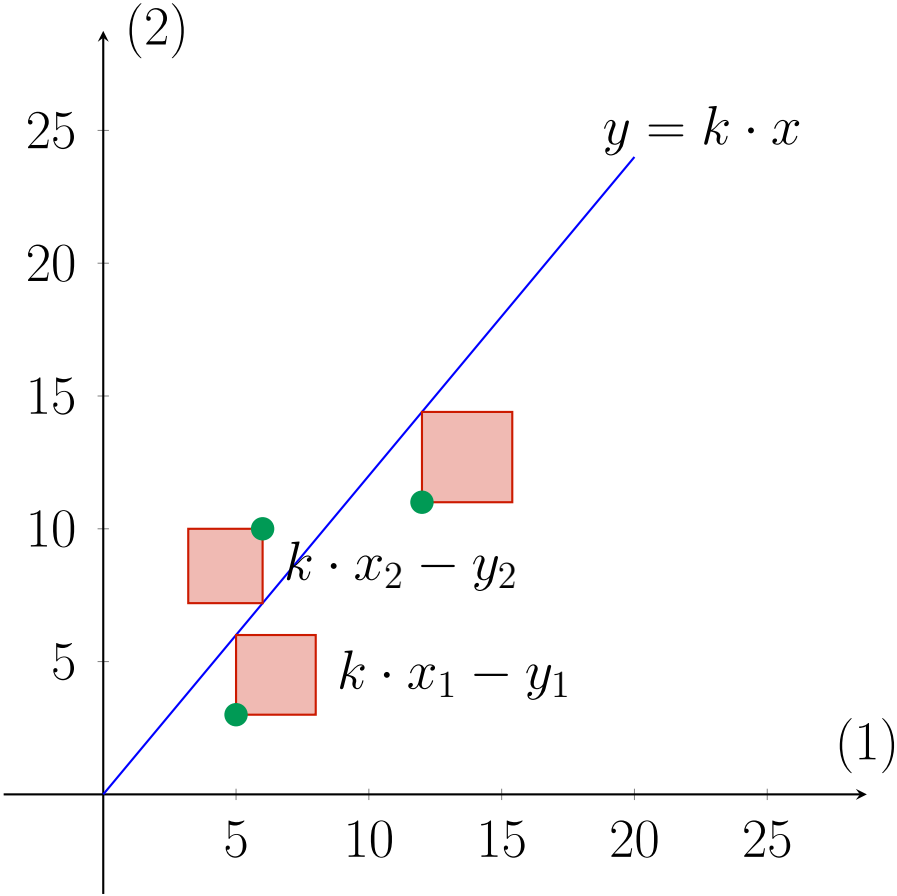
x	5	6	12
y	3	10	11



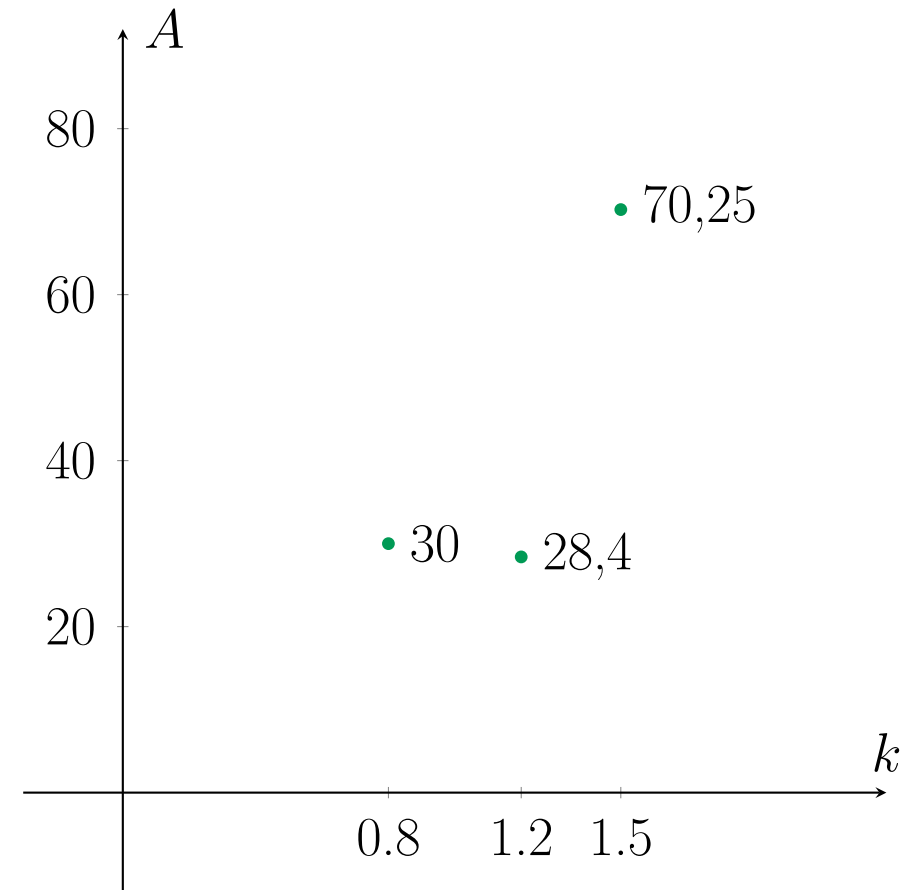
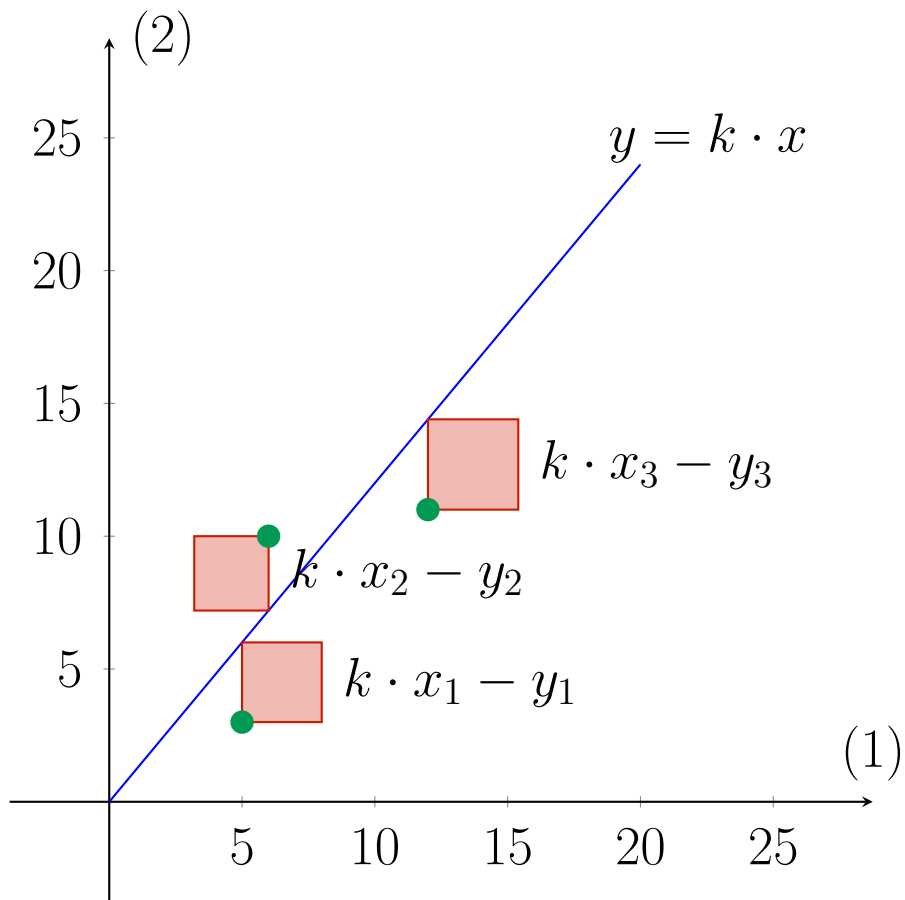
Regression

Data

x	5	6	12
y	3	10	11

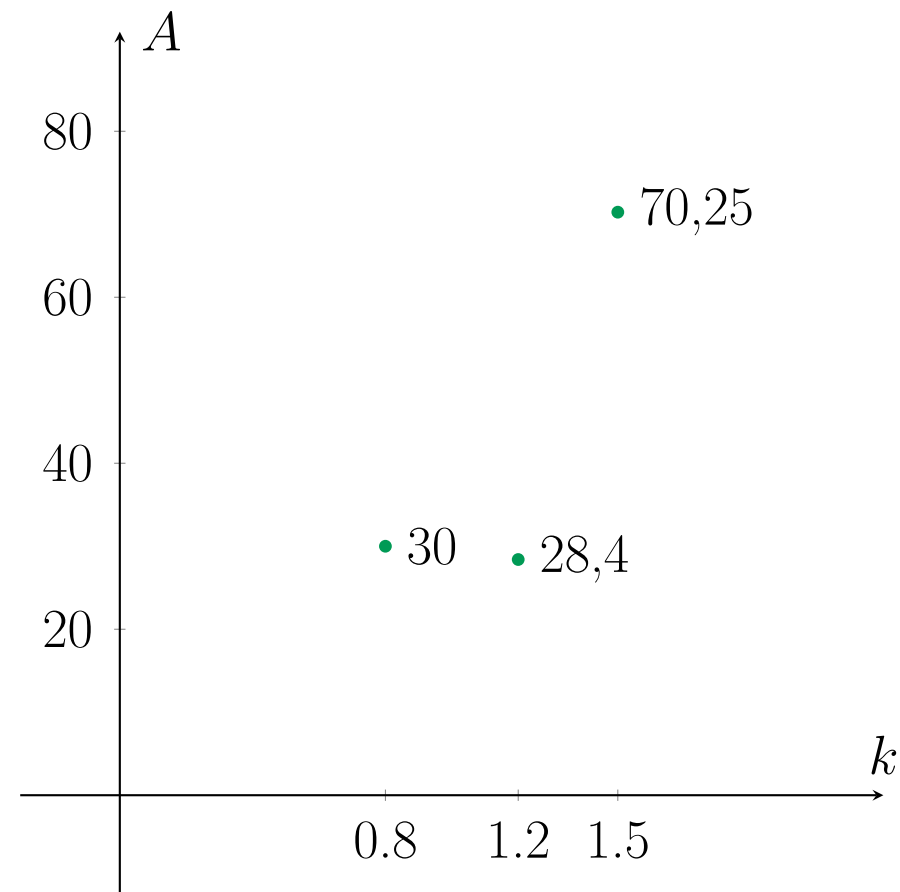
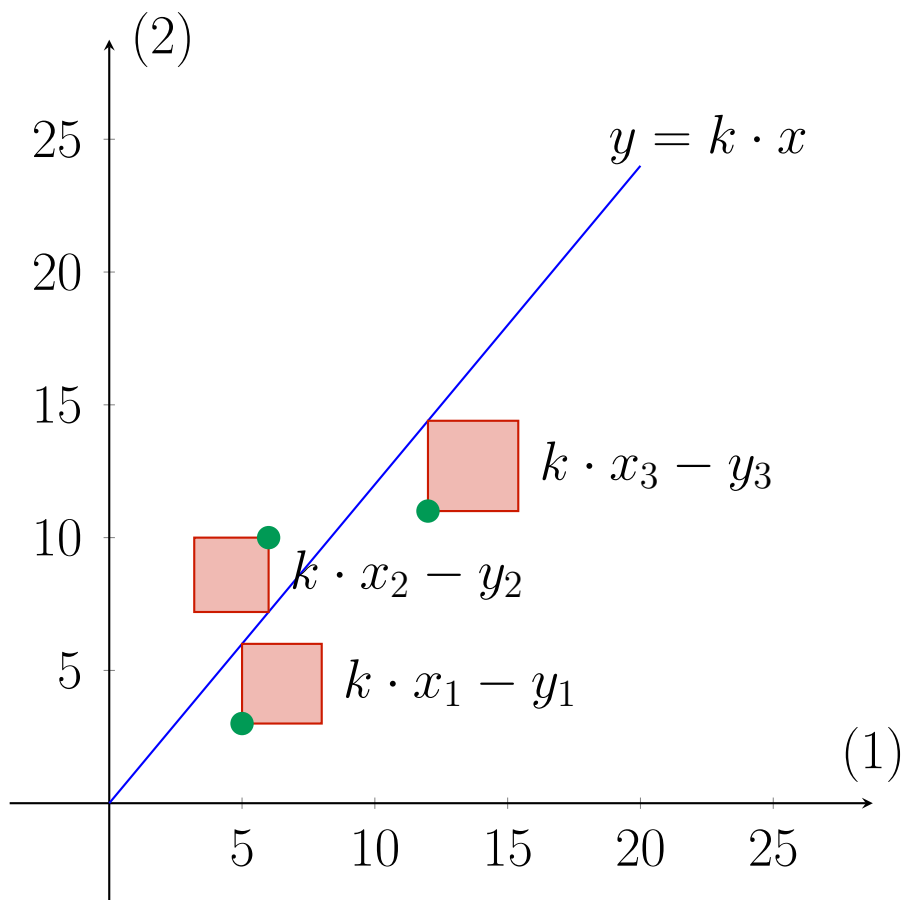


Regression



Regression

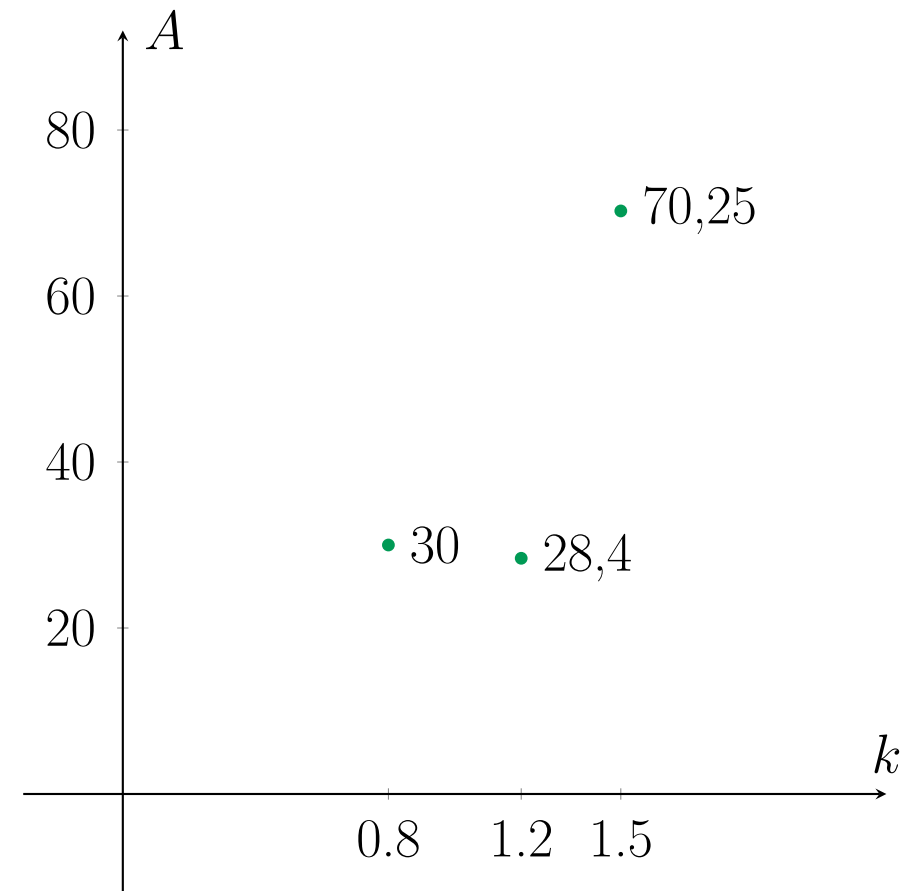
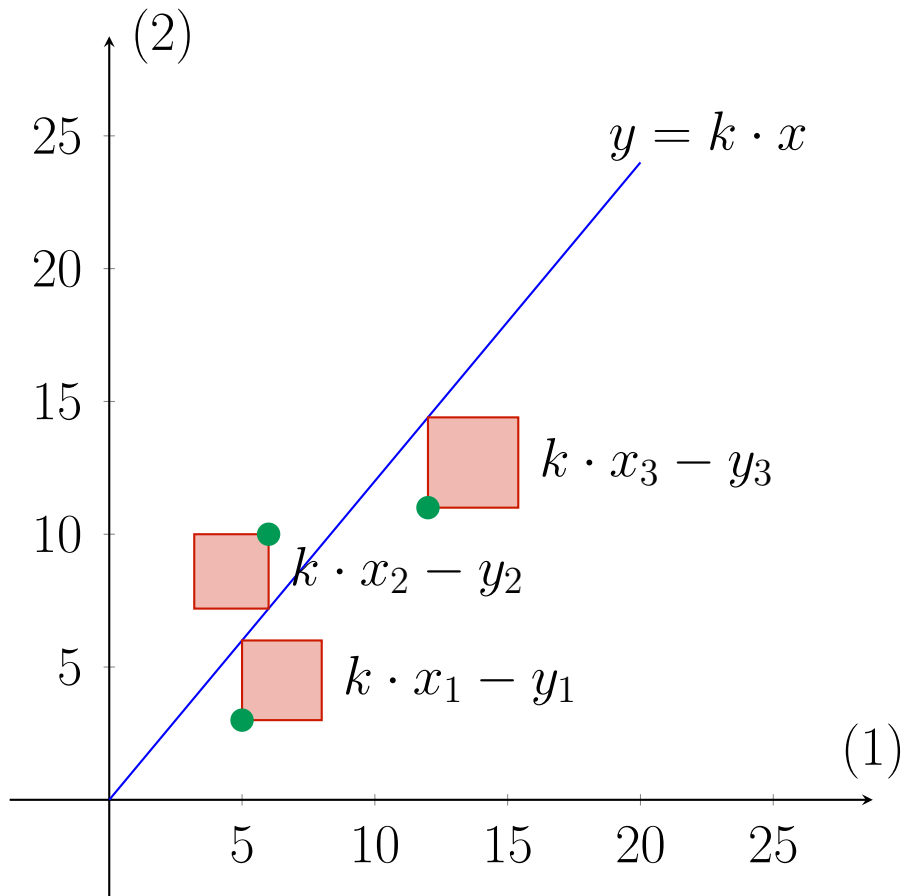
$$A = (k \cdot x_1 - y_1)^2 + (k \cdot x_2 - y_2)^2 + (k \cdot x_3 - y_3)^2$$



Regression

$$A = (k \cdot x_1 - y_1)^2 + (k \cdot x_2 - y_2)^2 + (k \cdot x_3 - y_3)^2$$

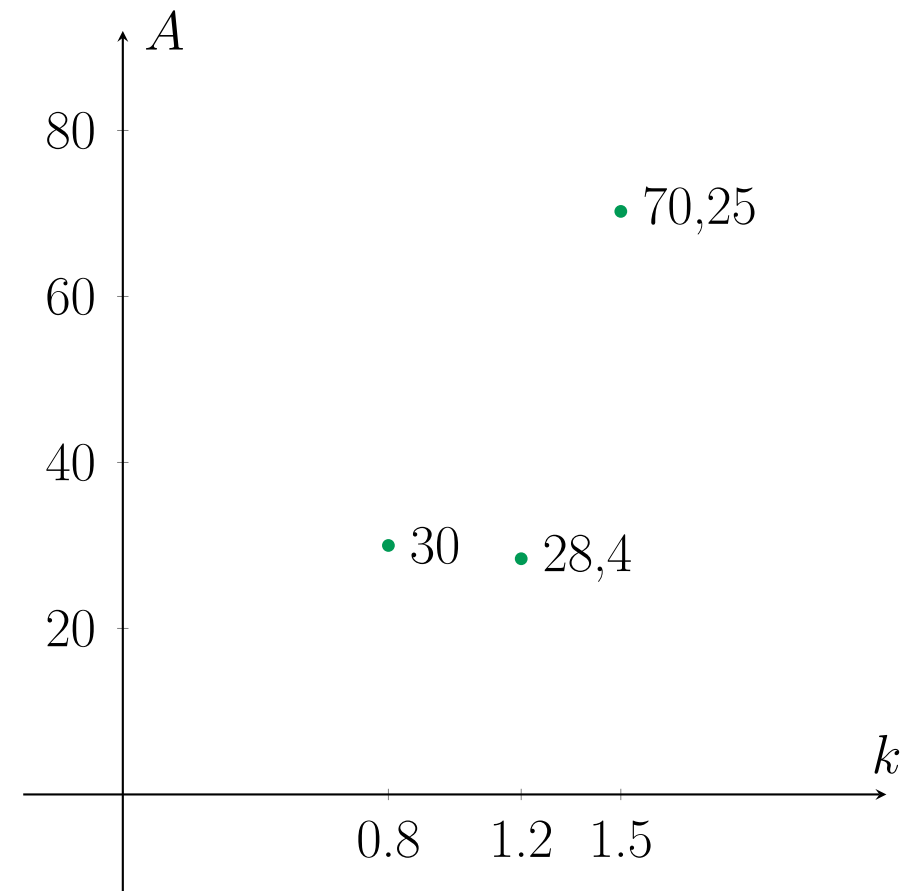
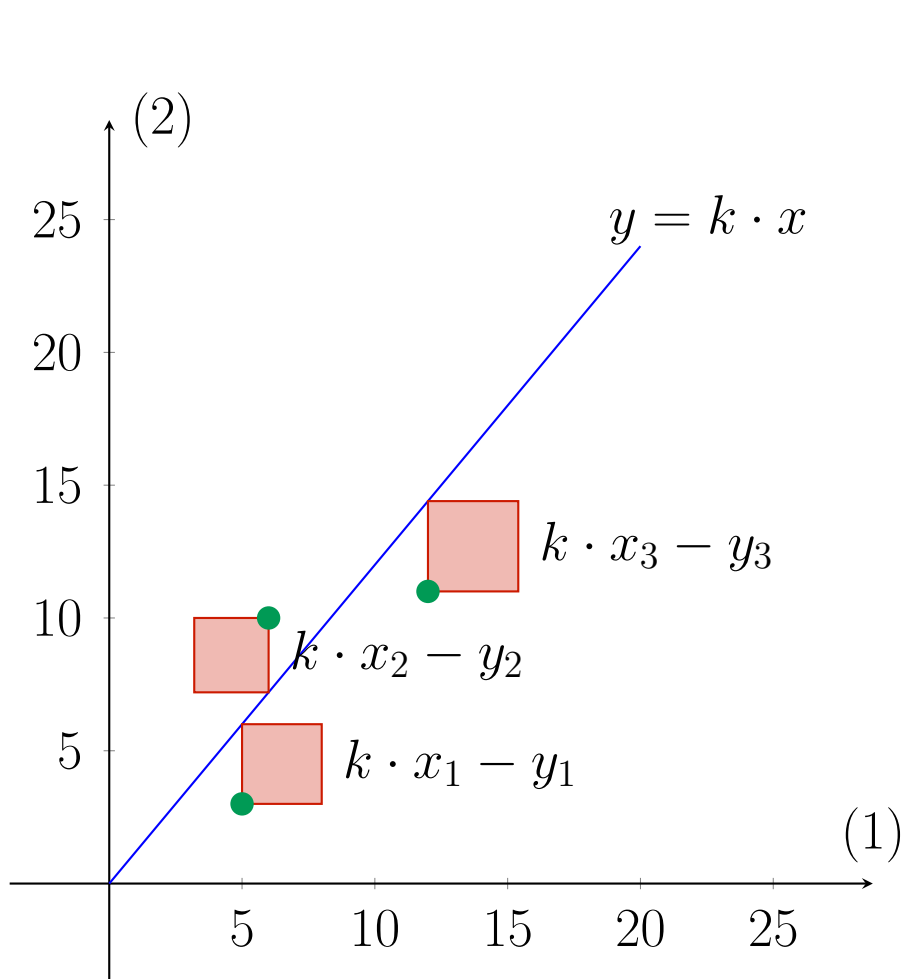
$$A = x_1^2 \cdot k^2 - 2x_1y_1 \cdot k + y_1^2 + x_2^2 \cdot k^2 - 2x_2y_2 \cdot k + y_2^2 + x_3^2 \cdot k^2 - 2x_3y_3 \cdot k + y_3^2$$



Regression

$$A = x_1^2 \cdot k^2 - 2x_1y_1 \cdot k + y_1^2 + x_2^2 \cdot k^2 - 2x_2y_2 \cdot k + y_2^2 + x_3^2 \cdot k^2 - 2x_3y_3 \cdot k + y_3^2$$

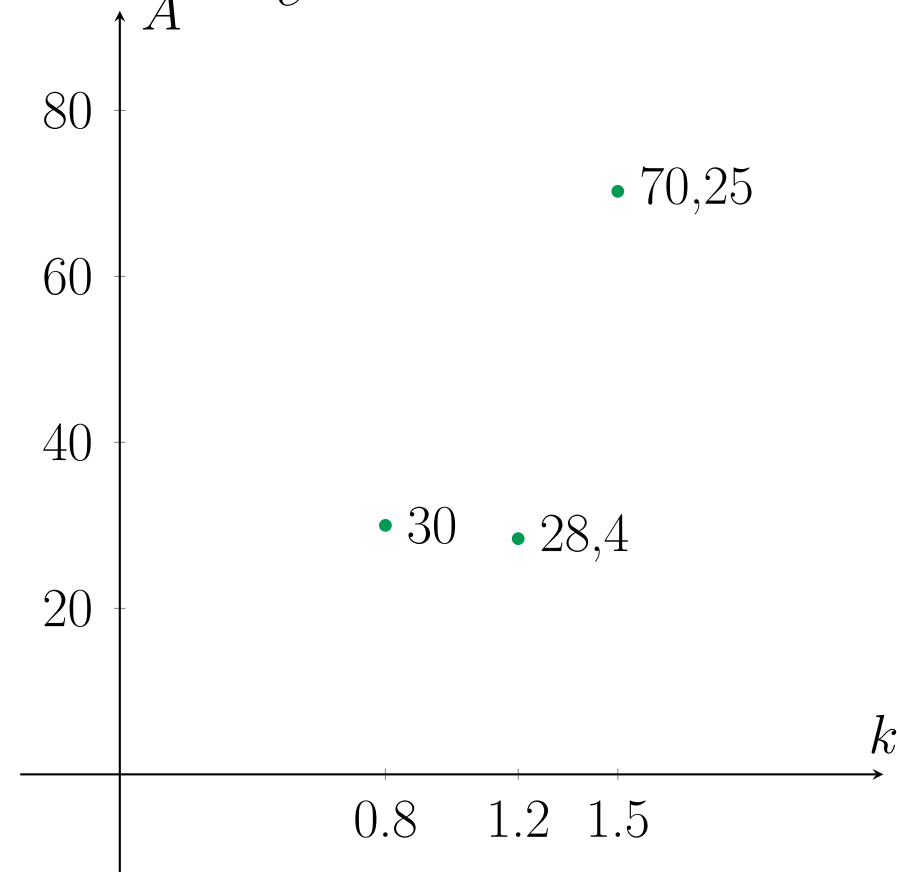
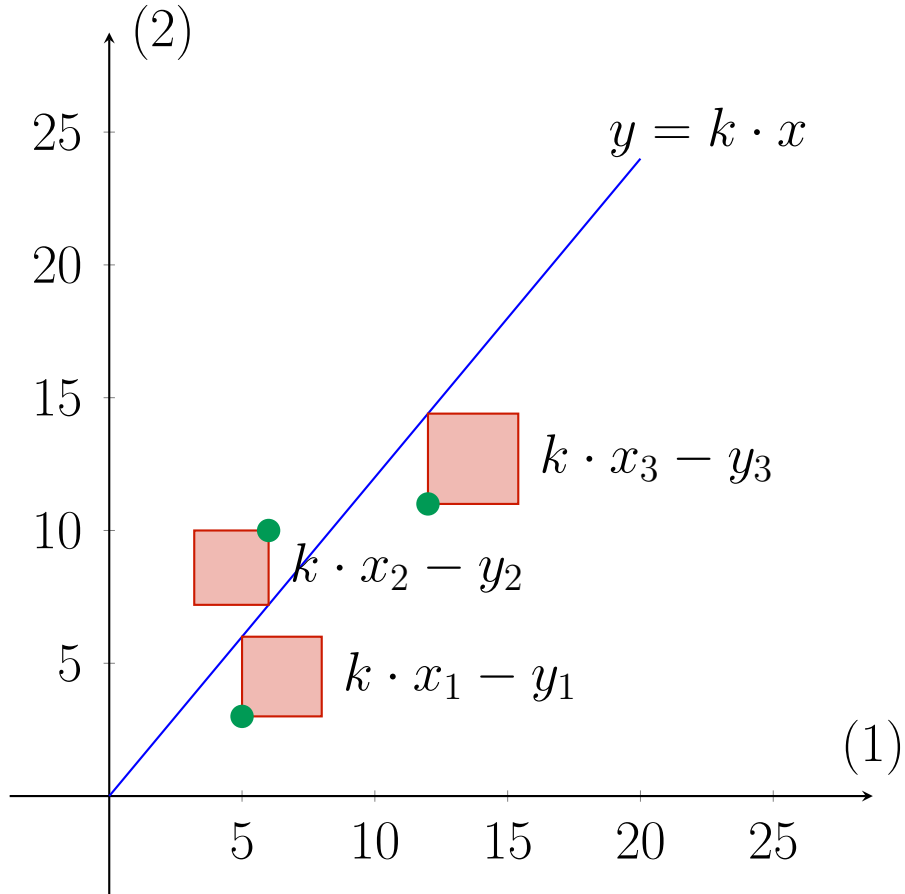
$$A = (x_1^2 + x_2^2 + x_3^2) \cdot k^2 - (2x_1y_1 + 2x_2y_2 + 2x_3y_3) \cdot k + (y_1^2 + y_2^2 + y_3^2)$$



Regression

$$A = (x_1^2 + x_2^2 + x_3^2) \cdot \textcolor{red}{k}^2 - (2x_1y_1 + 2x_2y_2 + 2x_3y_3) \cdot \textcolor{red}{k} + (y_1^2 + y_2^2 + y_3^2)$$

$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$



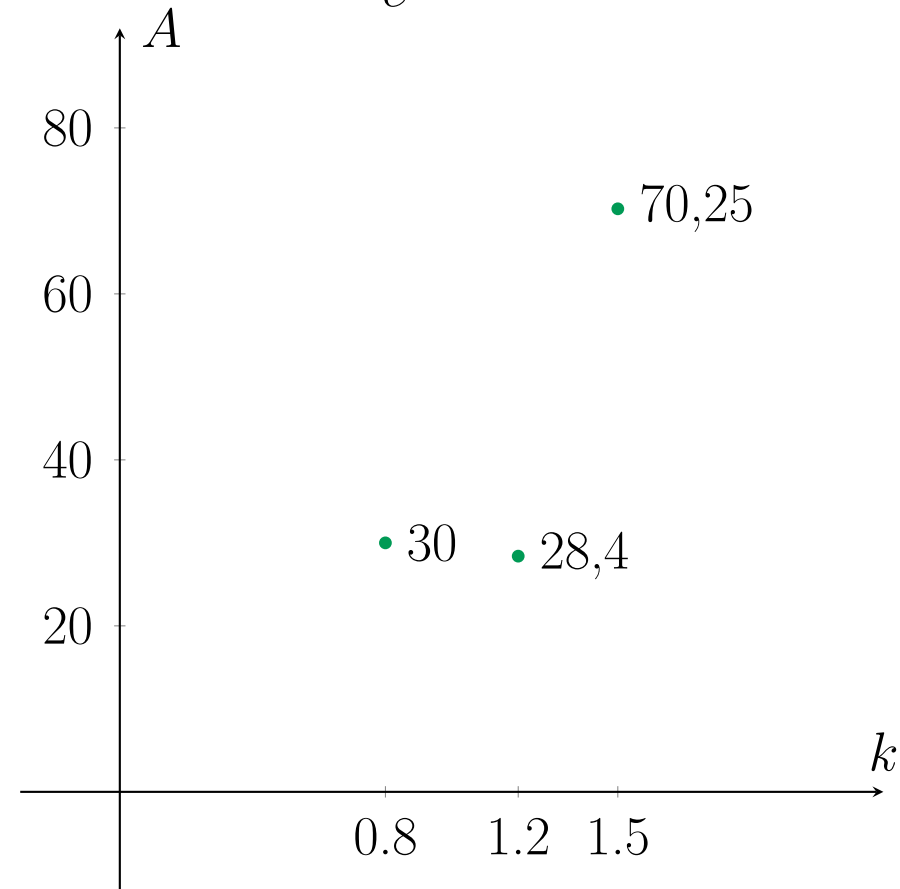
Regression

$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$A = \underbrace{5^2 + 6^2 + 12^2}_a \cdot k^2 - \underbrace{2(5 \cdot 3 + 6 \cdot 10 + 12 \cdot 11)}_b \cdot k + \underbrace{3^2 + 10^2 + 11^2}_c$$

Data

x	5	6	12
y	3	10	11



Regression

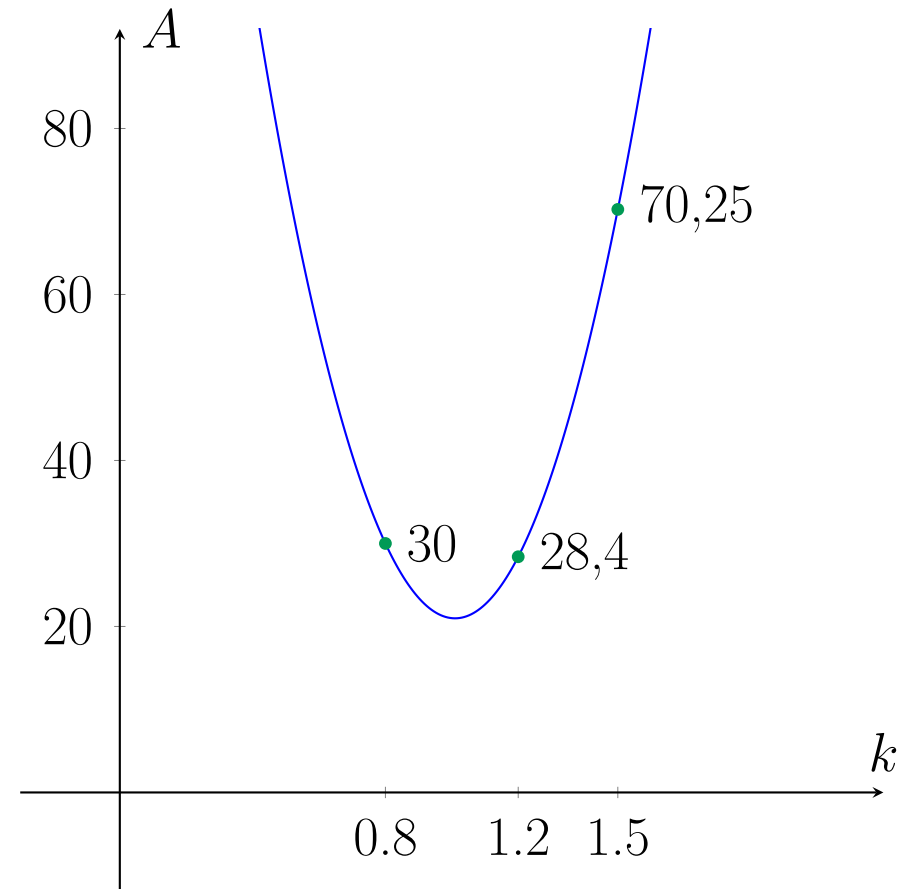
$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$A = \underbrace{5^2 + 6^2 + 12^2}_a \cdot k^2 - \underbrace{2(5 \cdot 3 + 6 \cdot 10 + 12 \cdot 11)}_b \cdot k + \underbrace{3^2 + 10^2 + 11^2}_c$$

$$A = \underbrace{205}_a \cdot k^2 - \underbrace{2 \cdot 207}_b \cdot k + \underbrace{230}_c$$

Data

x	5	6	12
y	3	10	11

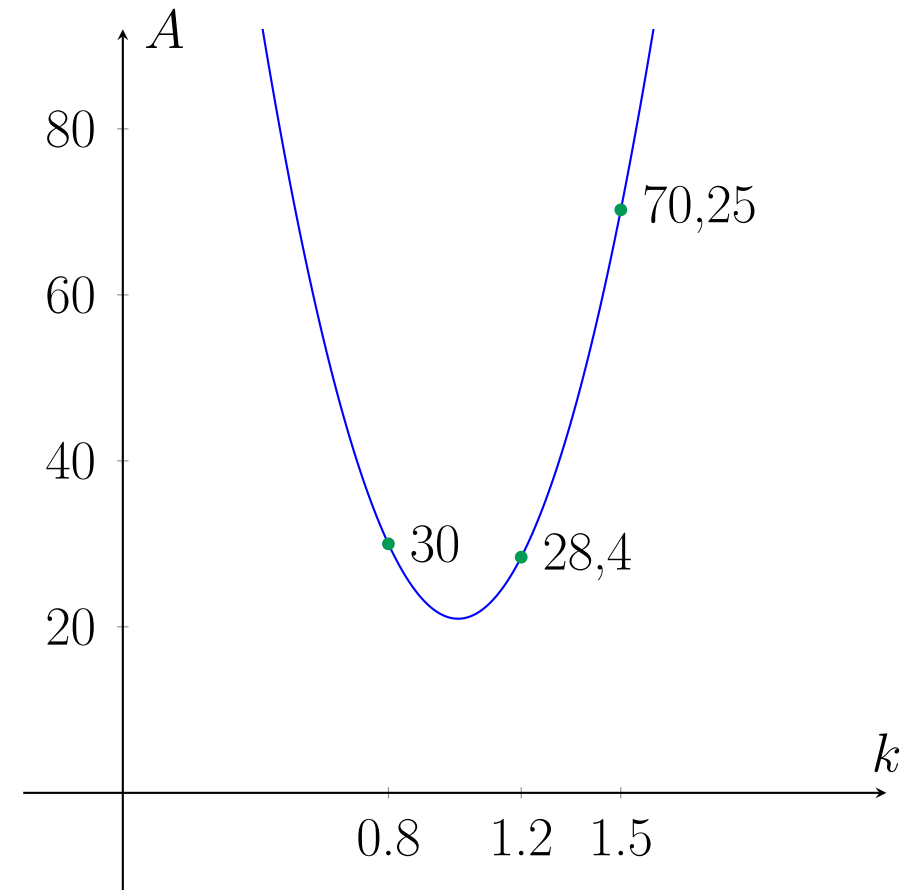


Regression

$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$A = \underbrace{205}_a \cdot k^2 - \underbrace{2 \cdot 207}_b \cdot k + \underbrace{230}_c$$

$$s = \frac{-b}{2a}$$

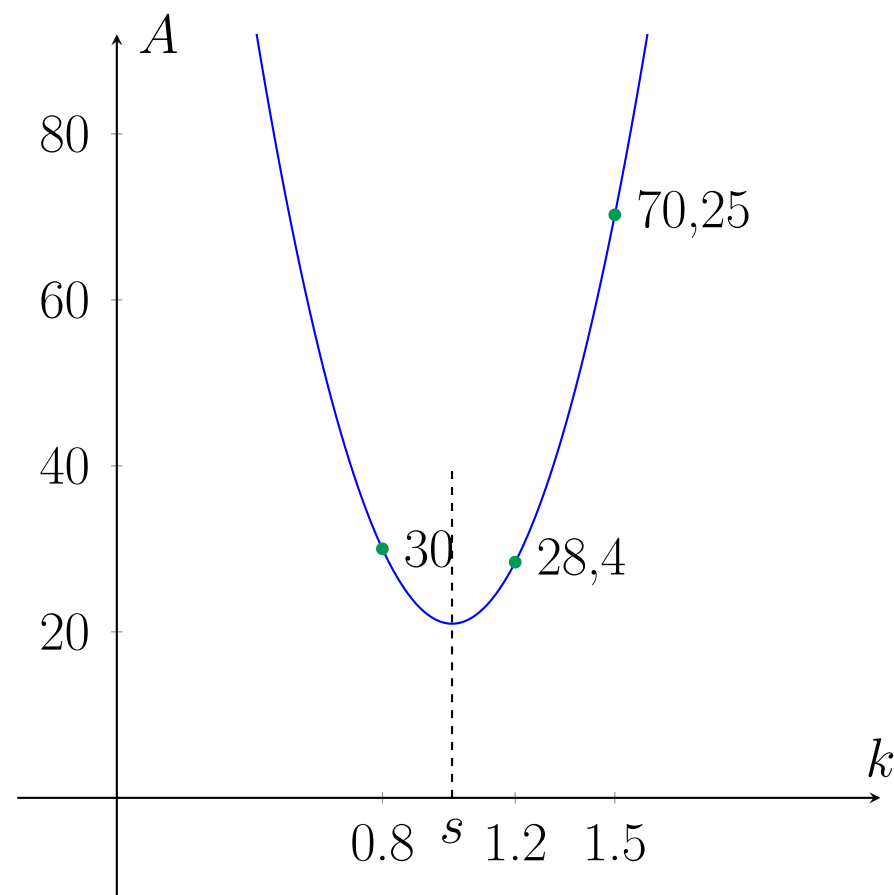


Regression

$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$A = \underbrace{205}_a \cdot k^2 - \underbrace{2 \cdot 207}_b \cdot k + \underbrace{230}_c$$

$$s = \frac{-b}{2a}$$



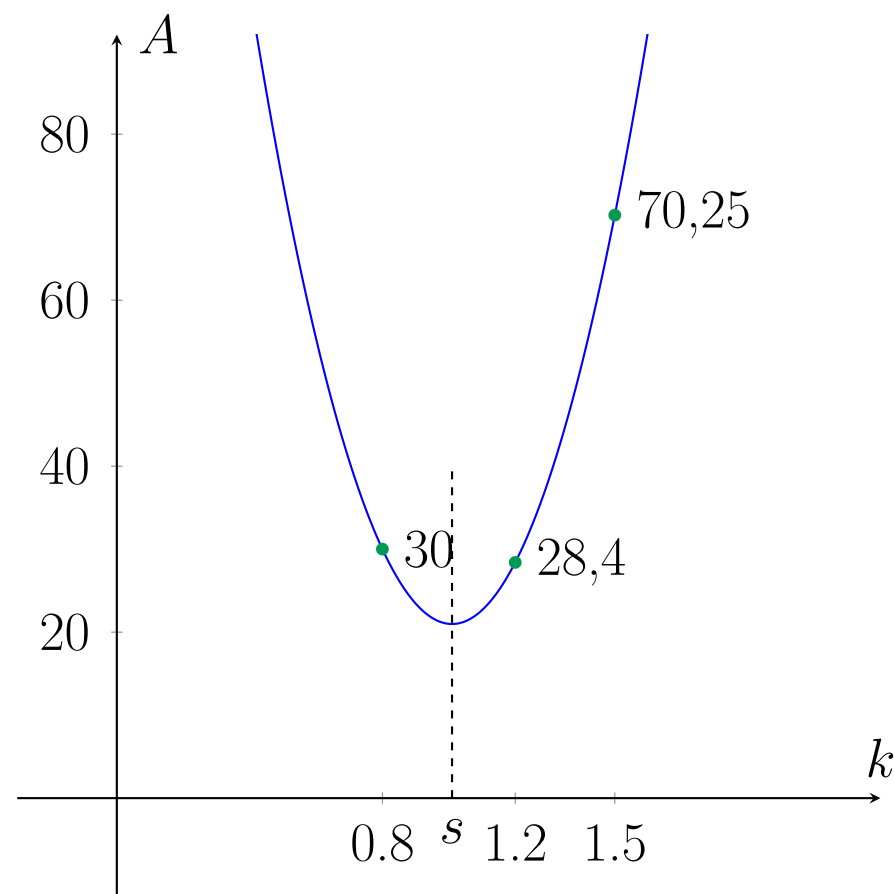
Regression

$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$A = \underbrace{205}_a \cdot k^2 - \underbrace{2 \cdot 207}_b \cdot k + \underbrace{230}_c$$

$$s = \frac{-b}{2a}$$

$$s = \frac{-(-414)}{2 \cdot 205}$$



Regression

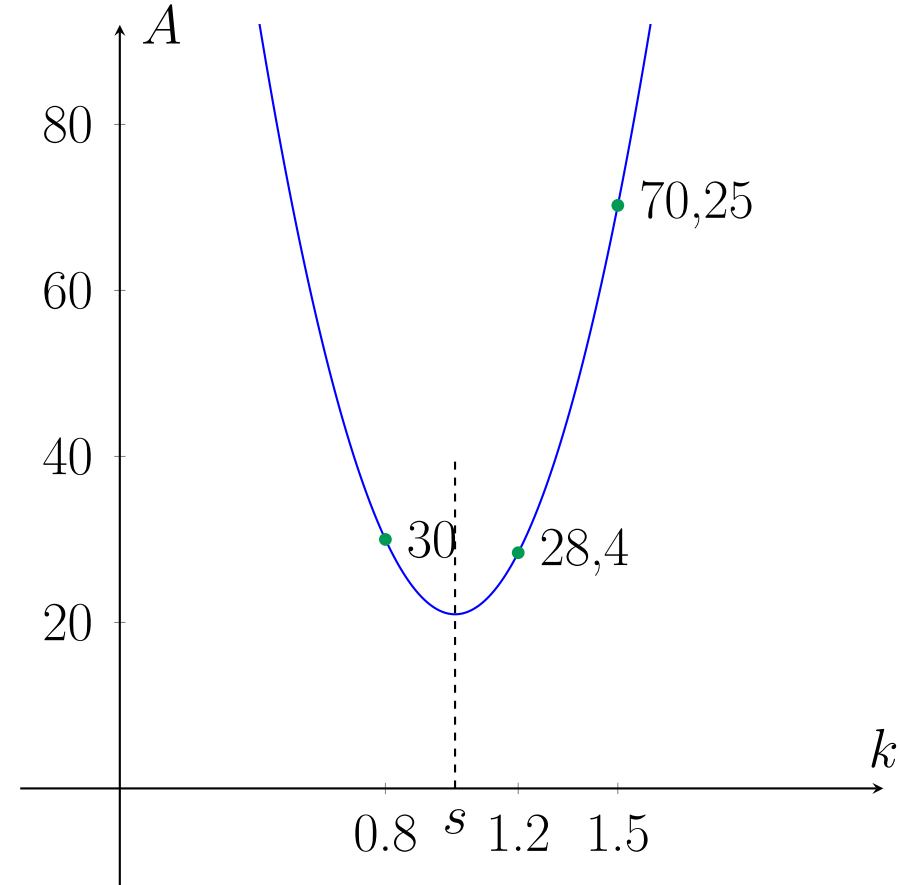
$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$A = \underbrace{205}_a \cdot k^2 - \underbrace{2 \cdot 207}_b \cdot k + \underbrace{230}_c$$

$$s = \frac{-b}{2a}$$

$$s = \frac{-(-414)}{2 \cdot 205}$$

$$s = 1,009756098$$

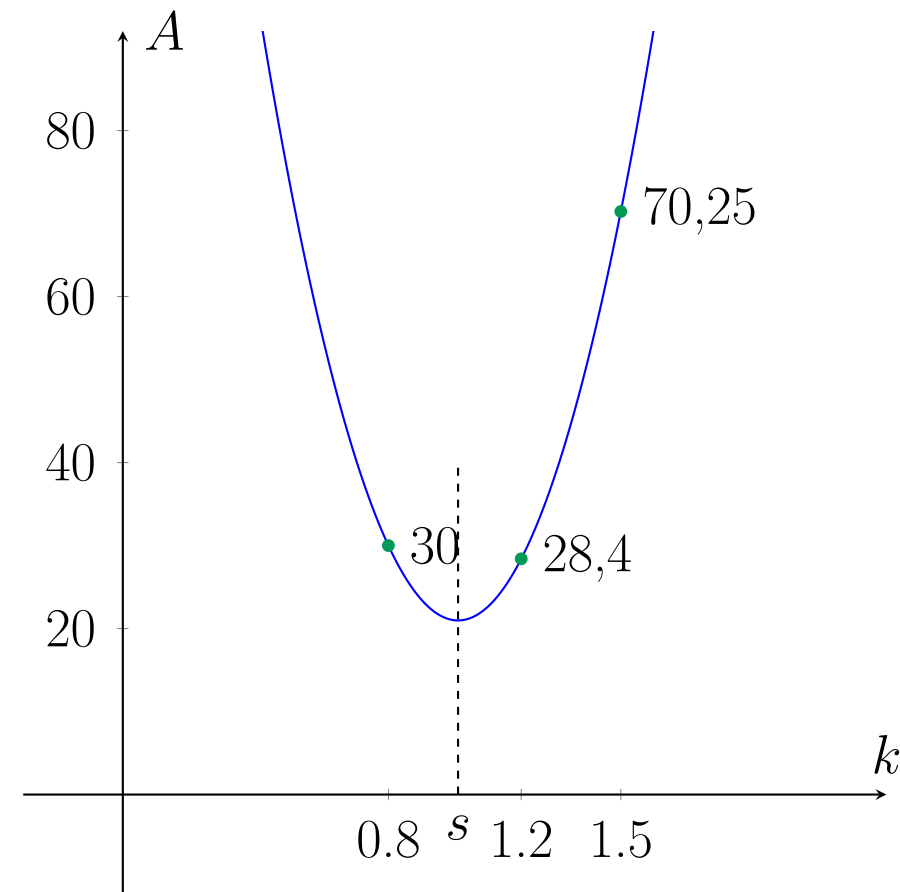


Regression

$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$s = \frac{-b}{2a}$$

$$s = \frac{-(-2 \cdot (x_1y_1 + x_2y_2 + x_3y_3))}{2 \cdot (x_1^2 + x_2^2 + x_3^2)}$$



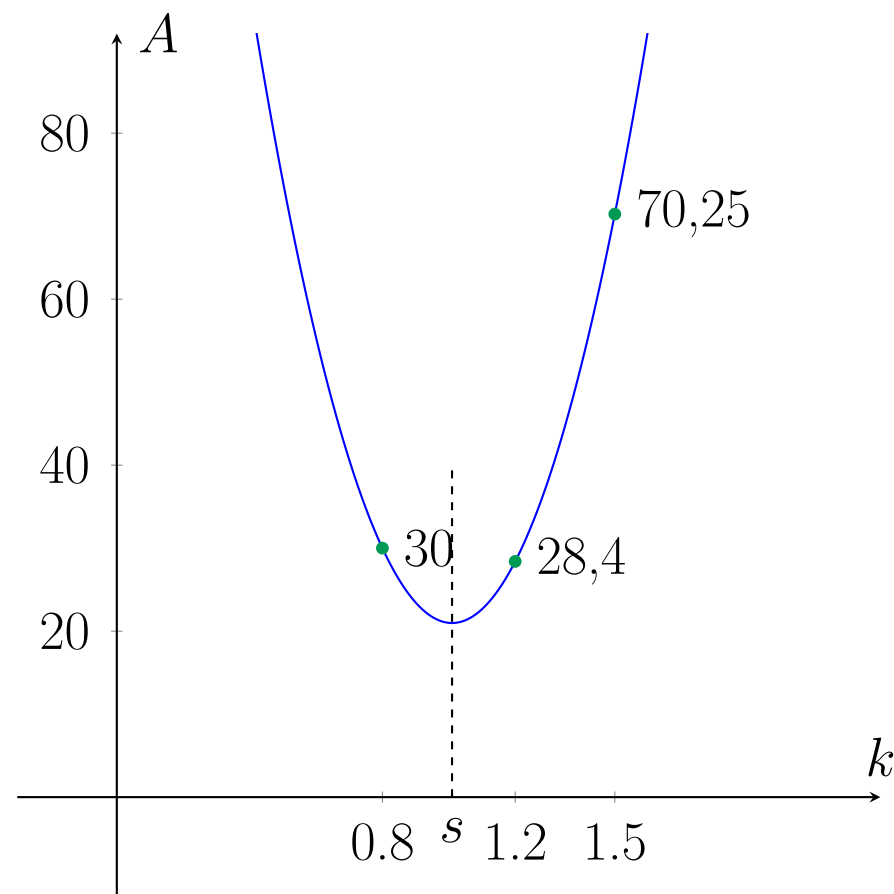
Regression

$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$s = \frac{-b}{2a}$$

$$s = \frac{-(-2 \cdot (x_1y_1 + x_2y_2 + x_3y_3))}{2 \cdot (x_1^2 + x_2^2 + x_3^2)}$$

$$s = \frac{2 \cdot (x_1y_1 + x_2y_2 + x_3y_3)}{2 \cdot (x_1^2 + x_2^2 + x_3^2)}$$



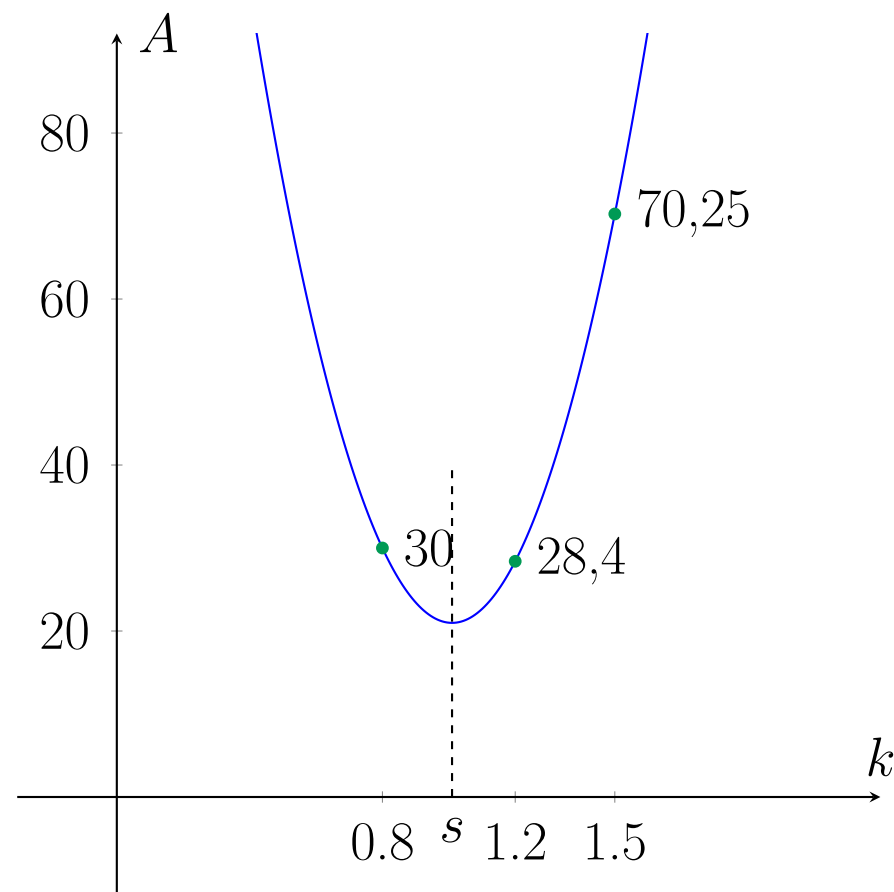
Regression

$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$s = \frac{-b}{2a}$$

$$s = \frac{2 \cdot (x_1y_1 + x_2y_2 + x_3y_3)}{2 \cdot (x_1^2 + x_2^2 + x_3^2)}$$

$$s = \frac{x_1y_1 + x_2y_2 + x_3y_3}{x_1^2 + x_2^2 + x_3^2}$$



Regression

$$A = \underbrace{x_1^2 + x_2^2 + x_3^2}_a \cdot k^2 - \underbrace{2(x_1y_1 + x_2y_2 + x_3y_3)}_b \cdot k + \underbrace{y_1^2 + y_2^2 + y_3^2}_c$$

$$s = \frac{-b}{2a}$$

$$s = \frac{x_1y_1 + x_2y_2 + x_3y_3}{x_1^2 + x_2^2 + x_3^2}$$

