# Zadanie 10

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Wiemy, ze prosta regresmi wyraza sie wzorem:

$$y = a \cdot x + b$$

gdzie,

$$b = \overline{y} - a\overline{x}; a = \frac{\sum_{i=1}^{n} x_i y_i - n\overline{xy}}{\sum_{i=1}^{n} x_i^2 - nx^2}$$

Wiec liczyny:

- $\overline{x} = \frac{1}{8} \cdot \sum_{i=1}^{8} x_i = \frac{56}{8} = 7$
- $\overline{y} = \frac{1}{8} \cdot \sum_{i=1}^{8} y_i = \frac{50}{8} = 5$
- $\sum_{i=1}^{8} x_i y_i = 364$
- $\sum_{i=1}^{8} x_i^2 = 524$
- $a = \frac{\sum_{i=1}^{n} x_i y_i - n\overline{xy}}{\sum_{i=1}^{n} x_i^2 - nx^2} = \frac{364 - 8 \cdot 7 \cdot 5}{524 - 8 \cdot 7^2} = \frac{84}{132} = \frac{7}{11}$
- $b = \overline{y} - a\overline{x} = 5 - 7 \cdot \frac{7}{11} = \frac{6}{11}$

Nasz otrzymany wynik to:

$$y = \frac{7}{11}x + \frac{6}{11}$$