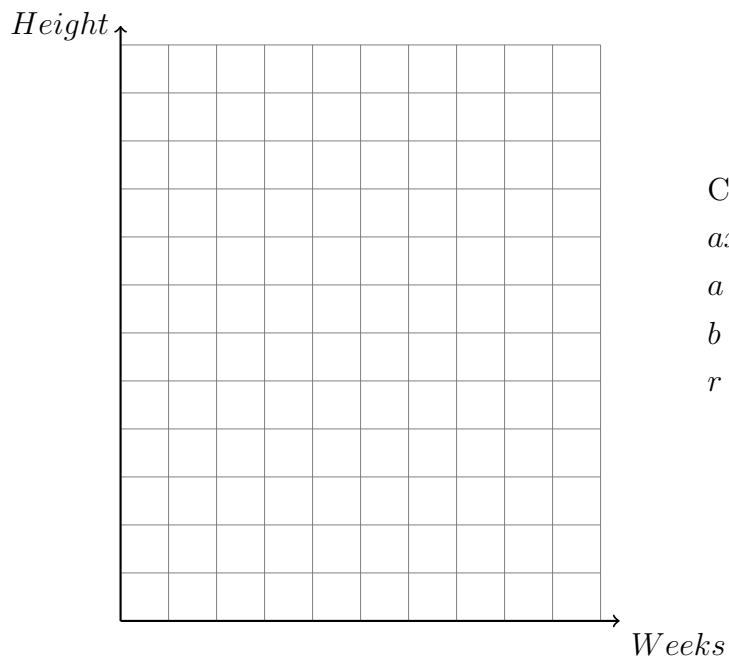


Fitting linear models and interpreting correlation

- Dr. Huson buys a new plant and measures how tall it is after a number of weeks. Some of his measurements are shown below. Plot the points in the grid below.

Weeks	2	5	7	10
Height (cm)	5	6	8	9



Calculator

$$ax + b$$

$$a = 0.529$$

$$b = 3.82$$

$$r = 0.976$$

State, to the *nearest tenth*, the linear regression equation that approximates the height, y , of the plants after x weeks.

Explain what the y -intercept means in the context of the problem.

Explain what the slope means in the context of the problem.

- Simplify the expression $2x + 3(x + 5) + 4$.
- Write the expression $3x + 2x^2 - 6x^2 + 9x + 5 + 3x$ as a polynomial in standard form.
- Write the expression $5x + 4x^2(2x + 7) - 6x^2 - 9x$ as a polynomial in standard form.
- Simplify $x^2 - 3x - 4 + 2x^2 + 2x + 4$
- Simplify $5(a^2 - 3a + 1) - 2(a^2 + 2a - 3)$