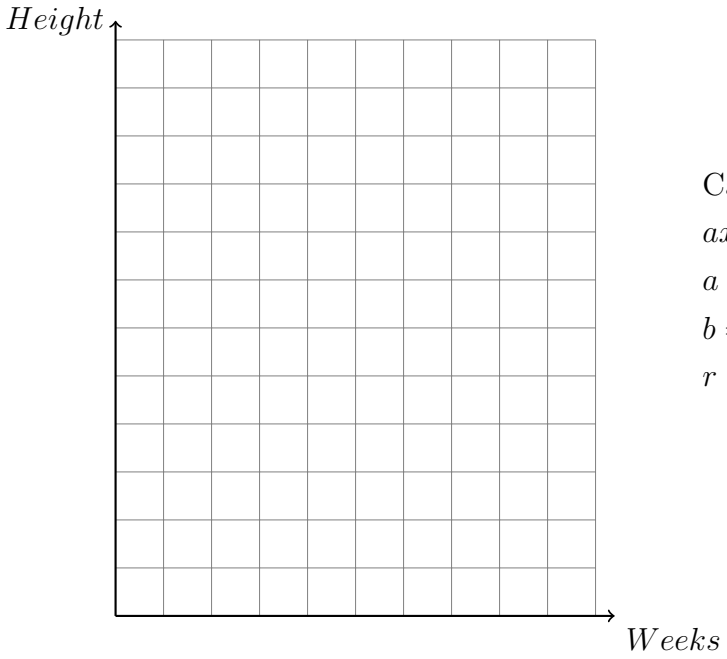
BECA / Dr. Huson / 11.1 IB Math SL Name: .
21 May 2019

Fitting linear models and interpreting correlation

1. 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
$ax + b$
$a = 0.592$
$b = 3.82$
$r = 0.972$

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.

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Simplifying polynomials, standard form

2. Simplify the expresion $2x + 3(x + 5) + 4$.

3. Write the expression $3x + 2x^2 - 6x^2 + 9x + 5 + 3x$ as a polynomial in standard form.

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

5. Simplify $x^2 - 3x - 4 + 2x^2 + 2x + 4$

6. Simplify $5(a^2 - 3a + 1) - 2(a^2 + 2a - 3)$