Day 6: Correlation and Regression Lines #1

Objective

In this challenge, we practice calculating the correlation between two elements.

Resources

Here are some useful articles explaining the relationship between r and the slopes of the regression lines.

1. Correlation and R-squared
2. Khan Academy tutorial about the coefficient of determination
3. Formula: $r^2 = b_{xy} \times b_{yx}$ where the symbols used are the standard ones, given the context.

Task

For a particular scatter plot, the line of regression of y on x is:

$$3x + 4y + 8 = 0$$

And the line of regression of x on y is:

$$4x + 3y + 7 = 0$$

Find the *Pearson Product moment* coefficient, r, correct to a scale of 2 decimal places.

Output Format

Your answer should be a single floating point/decimal number, correct to a scale of 2 decimal places. You can submit solutions in either of the 2 following ways:

1. Solve the problem manually and submit your result as *Plain Text*. In the text box below, enter a single floating point/decimal number.
2. Submit an *R* or *Python* program, which uses the above parameters (hard-coded), then computes and prints the score.

Your answer should follow the format below, and must not contain any extra white space or newline characters:

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4.23
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