What I've Learned From Project Euler

Teodor Spæren

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Contents

Part I

Problems

In this section of the document, I'll discuss how I solved each of the different equations. Here is a list of solutions I'm especially pleased with:

- Problem 18

- Problem 39 - Integer Right Triangles

- Problem 67

Chapter 1

Problems 1 to 100

1.1 Problem 39 - Integer Right Triangles

1.1.1 Task

If p is the perimeter of a right angle triangle

1.1.2 Solution

Part II

General knowledge

Chapter 2

Math

2.1 Pythagorean Triples

2.1.1 Generation

Linear Algebra

$$A = \begin{bmatrix} 1 & -2 & 2 \\ 2 & -1 & 2 \\ 2 & -2 & 3 \end{bmatrix} \quad B = \begin{bmatrix} 1 & 2 & 2 \\ 2 & 1 & 2 \\ 2 & 2 & 3 \end{bmatrix} \quad C = \begin{bmatrix} -1 & 2 & 2 \\ -2 & 1 & 2 \\ -2 & 2 & 3 \end{bmatrix} \tag{2.1}$$

- Wikipedia - Formulas for generating Pythagorean triples

- Wikipedia - Tree of primitive Pythagorean triples