Practical work No 6

Pythagorean numbers

Numbers x, y and z are called Pythagorean numbers if they satisfy the formula:

$$x^2 + y^2 = z^2$$

Your task is to find all **integer** Pythagorean numbers where $x, y \in \{1..1000\}$

You must use SSE instructions to perform checking are the x, y integer Pythagorean numbers.

Looping, output may be done in C.

Hints

- There is no SSE command to raise number to power of 2, but there is a multiply command
- There are square root commands in SSE instruction set

Evaluation

Simple execution – 7 points
Parallel excution by using all power of SEE (4 numbers in parallel) – 10 points