Pythagorean theorem: In any right triangle, the sum of the squares of the two legs is equal to the square of the hypotenuse; if $a$ and $b$ are the lengths of the legs and $c$ is the length of the hypotenuse, then $a^{2}+b^{2}=c^{2}$.
right triangle: A triangle with one right angle $\left(90^{\circ}\right)$.
legs of a right triangle: The two sides of a right triangle that form the right angle.
hypotenuse: The side of a right triangle that is opposite the right angle. It is always the longest side of a right triangle. (Remember: Its length must be longer than either of the legs, but shorter than the sum of the legs.)

Pythagorean triples: legs $a$ and $b$, and hypotenuse $c$ are all natural numbers.

Here are 16 Pythagorean triples with $\mathrm{c} \leq 100$ :

| $(3,4,5)$ | $(5,12,13)$ | $(8,15,17)$ | $(7,24,25)$ |
| ---: | ---: | ---: | ---: |
| $(20,21,29)$ | $(12,35,37)$ | $(9,40,41)$ | $(28,45,53)$ |
| $(11,60,61)$ | $(16,63,65)$ | $(33,56,65)$ | $(48,55,73)$ |
| $(13,84,85)$ | $(36,77,85)$ | $(39,80,89)$ | $(65,72,97)$ |

Note: $(6,8,10)$ is not included, as it is the same ratio as $(3,4,5)$.

