

Pythagoren theorem

1. Introduction

- Pythagorean theorem is defined ad shown on following figure [1]:

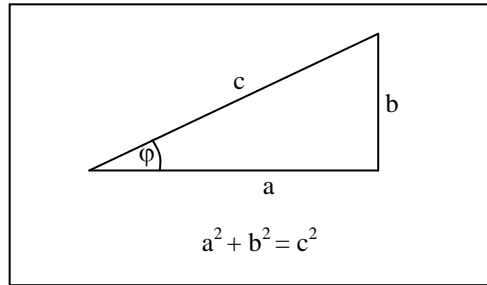


Figure 1.1. Pythagorean theorem.

2. Proof

- We shall now prove Pythagorean theorem using following figure [1]:

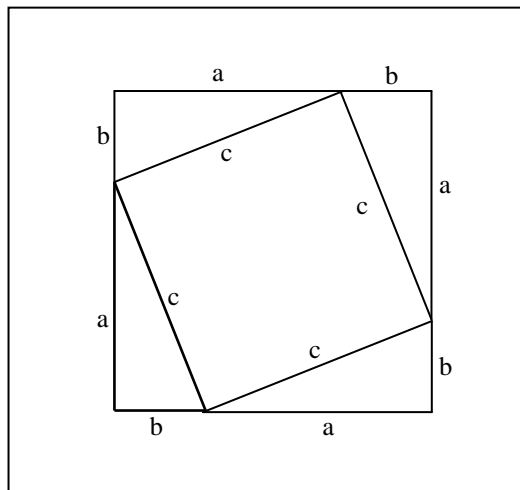


Figure 2.1. Proof of Pythagorean theorem.

- Surface of square with sides of length $(a+b)$ can be calculated like this:

$$(a+b)^2 = 4 \frac{ab}{2} + c^2$$

$$a^2 + 2ab + b^2 = 2ab + c^2$$

$$a^2 + b^2 = c^2$$

3. References

- [1] <http://www.cut-the-knot.org/pythagoras/index.shtml>