

## Pythagorean and Euclidean theorem

### fragments of Ancient Mathematics

**Task:** Say aloud Pythagorean and Euclidean theorem. Prove the theorems with help of some basic tools.

#### Some facts from history:

##### **Pythagoras of Samos (570 – 510 B.C.)**

Pythagoras was born on Samos island. He was a Greek philosopher and mathematician. He is known as „father of numbers “. His students called him „sofos“, which means a wise man. It is said, that Pythagoras responded to call him rather „philosofos“ (lover of wisdom).

##### **Euclid (325 – 260 B.C.)**

Euclid spent most of his life in Alexandria in Egypt. He was a Greek mathematician. Archimedes was one of his students. His main masterpiece is the book Basics (Stoicheia). It contains 13 books written in style “theorem – proof“. The books start with ten basic postulates, which defined Euclid's geometry. The book is the most successful mathematical book of all times -in fact, it was used more than 2 000 years.



### Exercise 1: Pythagorean theorem

- a) Write down the version of Pythagorean theorem.

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- b) Prove Pythagorean theorem with help of some tools provided by your teacher.



### Exercise 2: Euclidean theorem

- a) Write down the version of Euclidean theorem about the leg.

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- b) Write down the version of Euclidean theorem about the height.

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- c) Prove Euclidean theorem about the leg with help of some tools provided by your teacher. Draw and write down the proof scheme. You can continue with the next theorem.