IDENTITIES

Enlightening
Interdisciplinarity
in **STEM**
for Teaching

Make a proof of Pythagora's theorem

Co-funded by the
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of the European Union

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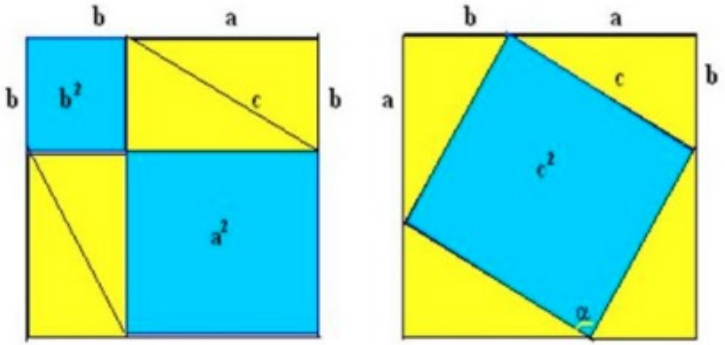
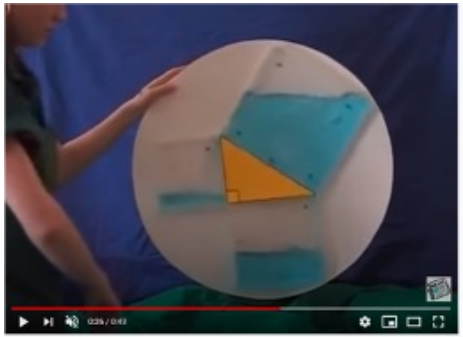
Lab activity

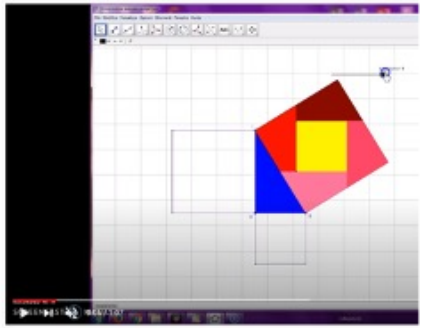
Write a proof of the Pythagorean Theorem.

Share your proposal.

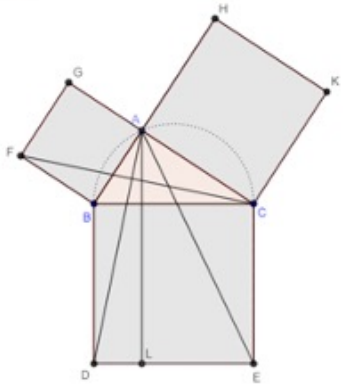




Teorema di Pitagora: dimostrazione con acqua



Dimostrazione Pitagora con GeoGebra PERIGAL



Dimostrazione

Per dimostrare il risultato vogliamo sfruttare il **primo teorema di Euclide**. Quindi tracciamo l'**altezza**, appure detta la **perpendicolare** o **proiezione**, dal vertice B sul lato $\bar{AC}$. Chiamiamo il punto d'incontro con l'ipotenusa, AC, H e lo prolunghiamo in modo tale che il quadrato sull'ipotenusa sia suddiviso in due rettangoli di area rispettivamente:

$$(\bar{AH})(\bar{AC}) \text{ e } (\bar{HC})(\bar{AC})$$

Are those explanations all proofs? What you “prefer”? Why?

Are there differences? Which proof is more convincing? Why?

Are all the proposed proofs “mathematical proofs”?
What do you mean by “mathematical proof”?

Do you think that proofs can be found also in Physics?
If so, what are the common aspects and main differences between proofs in mathematics and Physics?

The MU puzzle

LETTERS: `M, I, U`

OUR SOUL POSSESSION: `MI`

RULE I: If you possess a string who last letter s `I`, you can add on a `U` at the end.

RULE II: Suppose you have `Mx`. then you may add `Mxx` to your collection.

RULE III: If `III` occurs in one of the strings in your collection, you may make a new string with `U` in place of `III`.

RULE IV: If `UU` occurs inside one of your strings, you can drop it.

Can you derive MU?

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