

# Artificial Intelligence, a promising agent of mathematical education (?)

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# Question

Is it feasible to apply AI as an agent to support and streamline the school education of pupils with specific needs, from the pupils with minor brain dysfunction to the gifted pupils, to focus on their individual skills and demands?

# Motivation

A lower secondary classroom:

Pupils with minor brain  
dysfunction + an assistant

Pupils with no specific  
educational needs

Gifted pupils

Teacher

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AI

# Tasks for AI

- To collect data on educational progress of pupils.
- To provide the teacher with this data.
- To individualize the path of learning the topic that is taught, if necessary.

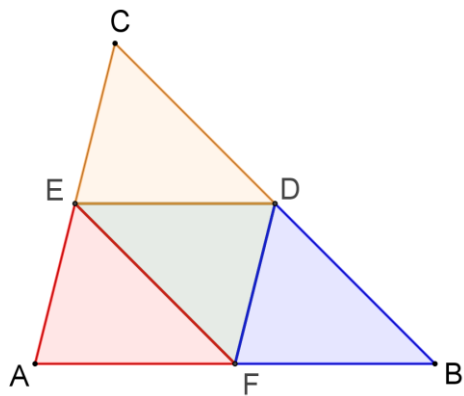
Specifically, with respect to

- goals,
- pace,
- problems to be solved

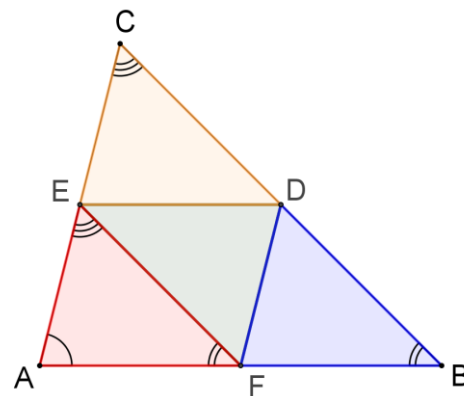
# Example: The Triangle Midsegment Theorem

The line segment connecting the midpoints of any two sides of a triangle is parallel to the third side and its length is one-half the length of the third side.

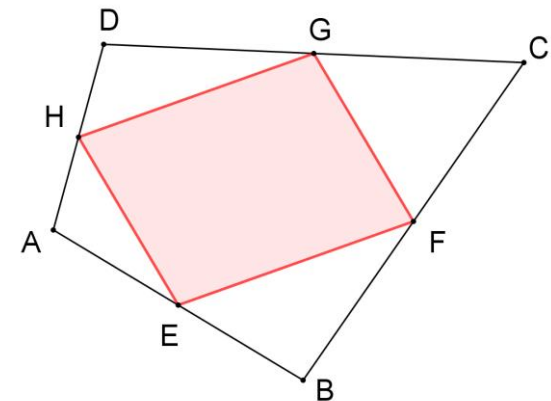
Manipulation with shapes.  
Identification of similar and  
congruent triangles.



Justification of similarity of triangles,  
its use to prove the theorem.



Application of the theorem to prove  
another statement.



# Practical implementation

Online system with an interface accessible via various devices (desktop, tablet, mobile phone).

The pupil's interaction with this interface should not be continuous.

We are interested in participating in the development and mainly the testing of such solution, if it is feasible.

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