



# **Digitalized Interactions:** The Changing Roles and Relationships between Students and Teachers

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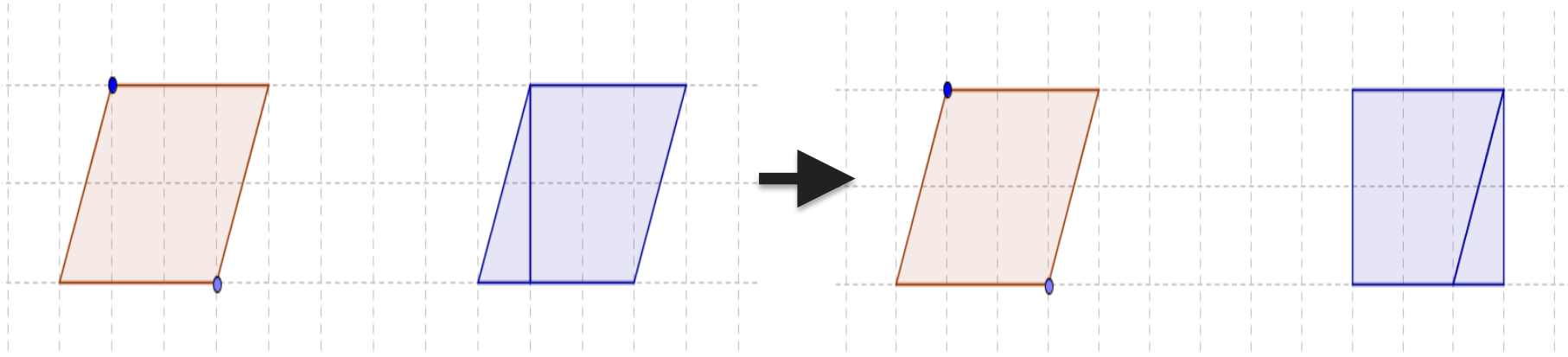
# Effects of Digitalization on the Learning-Teaching Process

- Enhance visual demonstrations and improve modes of presentation.
- Promote exploratory learning through practical activity.
- Enable collaborative learning and encourage peer coaching.

# Example: Areas of Geometry

- GeoGebra:
  - An interactive mathematics software program for explaining a mathematical concept or procedure.
  - Elements of constructions such as points, segments and lines can be created and modified easily via mouse or touch.
  - Geometrical constructions can be changed directly afterwards.

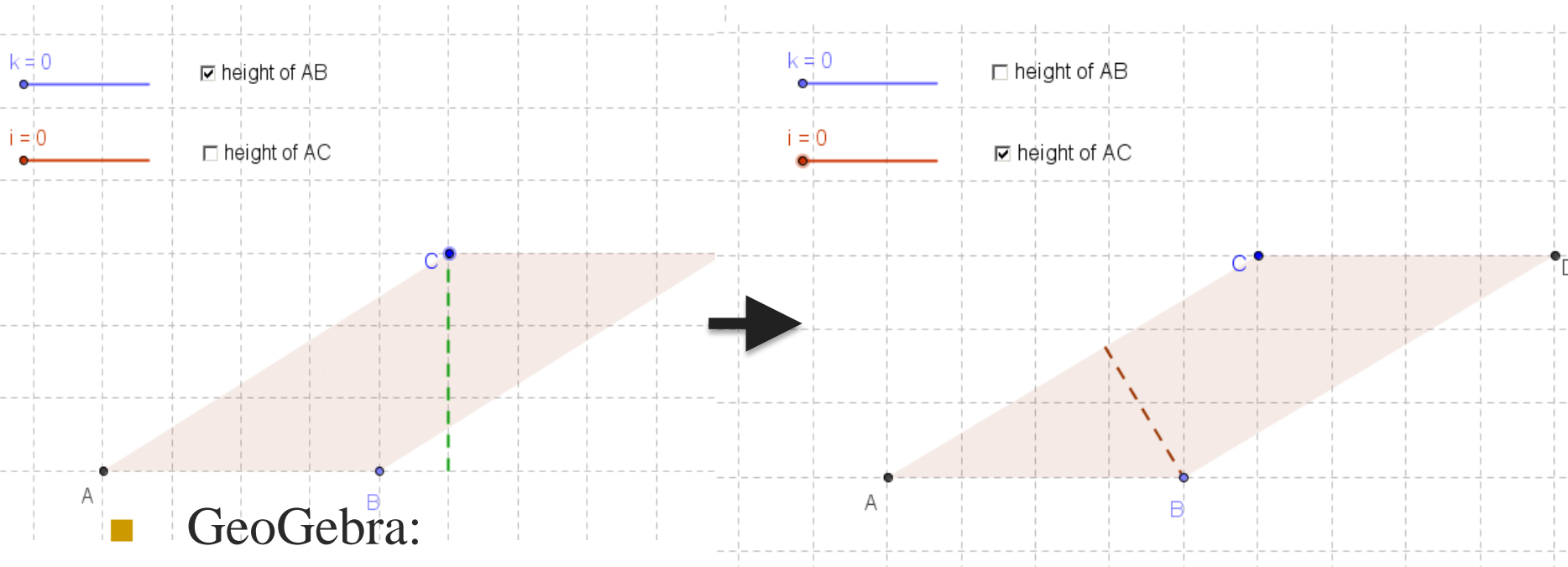
# Example 1: Area of Parallelogram



## ■ GeoGebra:

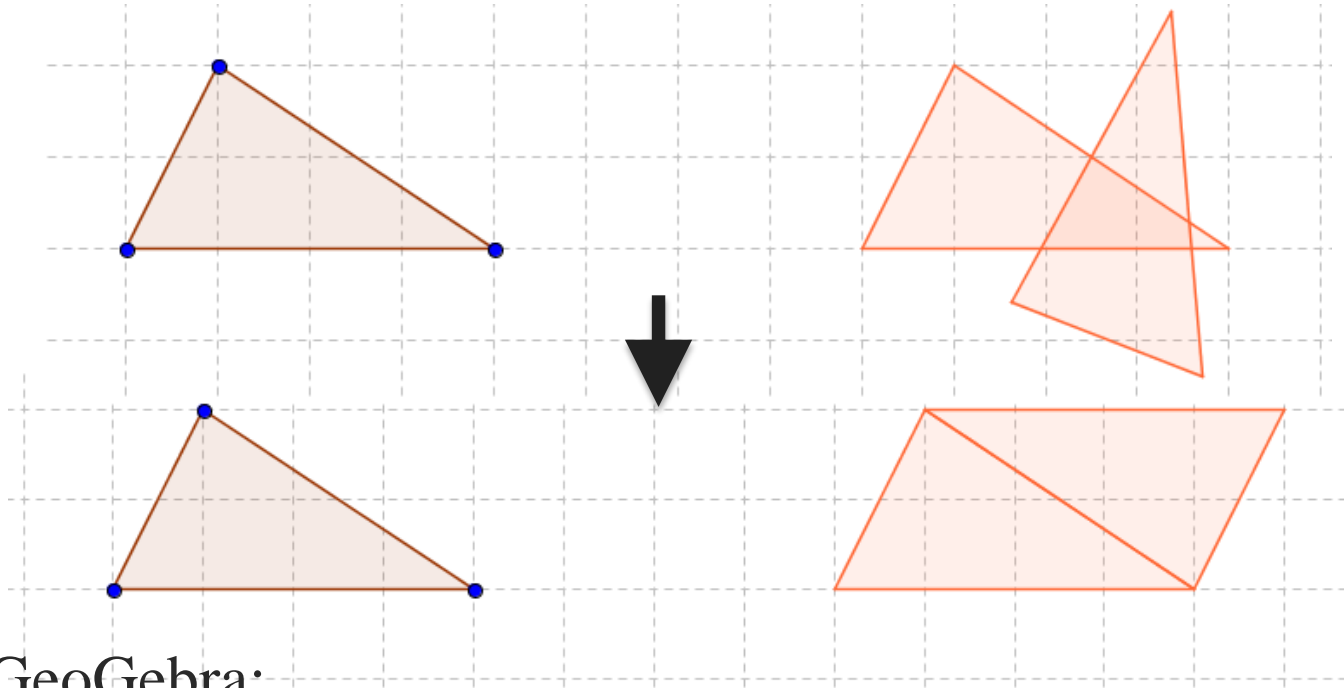
- Drag to move and reshape the parallelogram.
- Understand the formula of area of parallelogram.

# Example 2: Area of Parallelogram



- Click to change the base.
- Understand that any of the four sides can be chosen as the base.

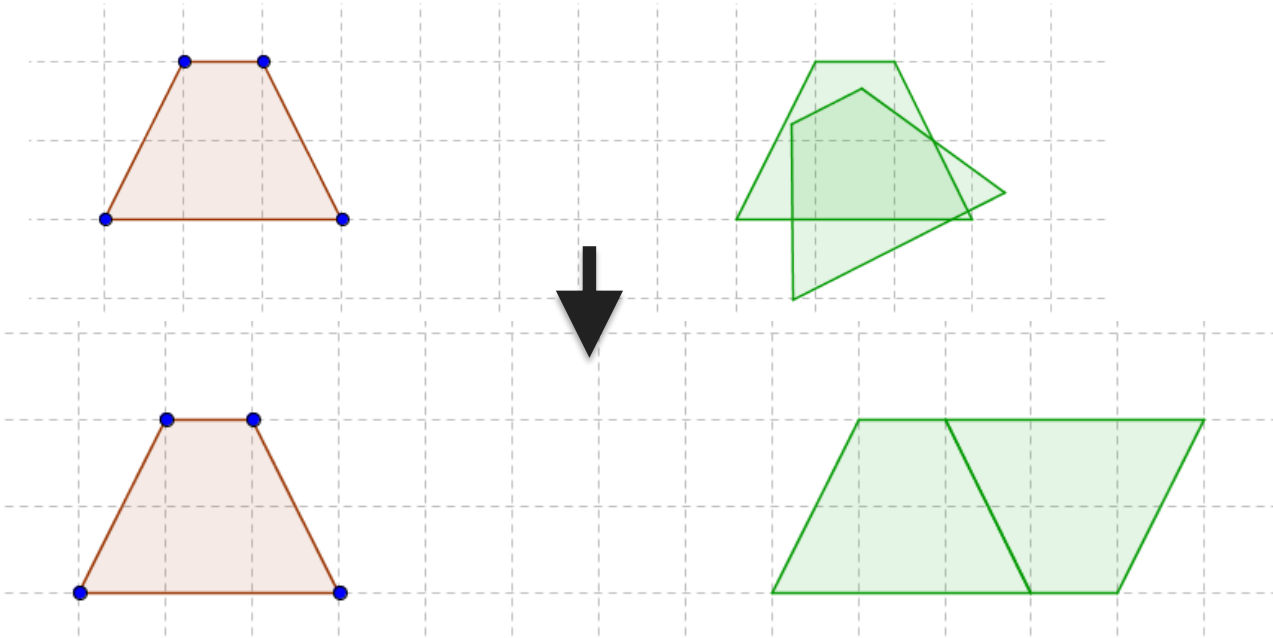
## Example 3: Area of Triangle



### ■ GeoGebra:

- Drag to rotate and move the triangle, and to form a parallelogram.
- Understand the formula of area of triangle.

## Example 4: Area of Trapezium



### ■ GeoGebra:

- Drag to rotate and move the trapezium, and to form a parallelogram.
- Understand the formula of area of trapezium.

# Changes in Teacher-Student Interactions

- From one-way presentation to dialectical exploration;
- From direct instruction to learning-in-practice;
- From teachers as the primary source of information to teachers as the facilitator / navigator of knowledge.



# Changes in Student-Student Interactions

- From solitary learners to peer coaches;
- From competitors to collaborators;
- From passive learners to actively participants.

# Redefining the Roles of Teachers and Students

	<b>Traditional</b>	<b>Digitalized</b>
<b>Role of Teachers</b>	Leader/Authority	Facilitator/Partnership
<b>Role of Students</b>	Passive Recipient	Active Learner/Peer Coach
<b>Knowledge</b>	Transmitted from Instructors	Constructed by Students
<b>Mode of Learning</b>	Individualistic	Collaborative

# **Digitalized Interactions:**

## The Changing Roles and Relationships between Students and Teachers

**Thank You!**

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