Parallelograms create Trapezoids

Learning objective: Find the area of trapezoids

Duration: 15 – 20 min

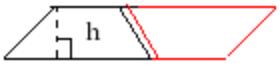
Grades 7 and 8

Material:

- cut-outs of congruent trapezoids in two different colors. 

Activity Description:

- Divide your students into groups of 4.
- Provide each group with a set of two congruent trapezoids
- Ask students to create a shape using two congruent trapezoids.
- Record the results. We can obtain a parallelogram.



- Ask them to find the area of the parallelogram obtained: $A = \text{b x h}$

- Provide each group with the following questions for them to discover the formula of the area of a trapezoid

  - ⇨ How can you find the length of the base?

  - ⇨ By adding the two bases of the trapezoids

  - ⇨ What can you conclude: $A = (b_1 + b_2) \cdot h$

  - ⇨ Can you get the area of each trapezoid?? (by substitution)

  - ⇨ What can you conclude?? => $A \text{ trapezoid} = \frac{A}{2} = \frac{(b_1 + b_2) \cdot h}{2}$