THE WAY TOWARDS PRACTICAL SCIENCE

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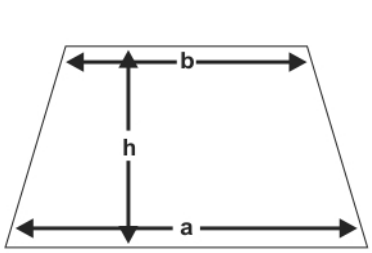
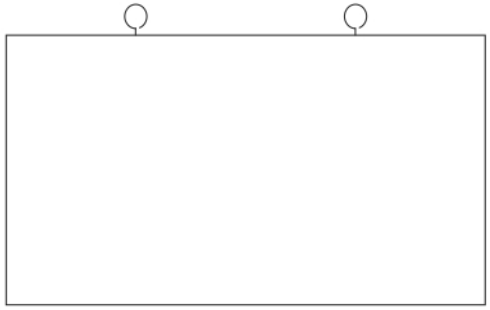
AREA OF A TRAPEZIUM

To find the area of the trapezium using two identical trapezia.

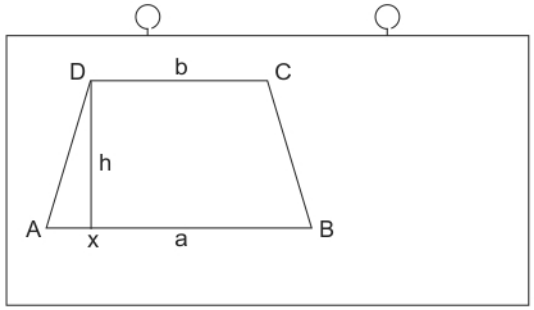
Assembly :
Two identical trapezium made out of 12 mm Eva rubber sheet. A base of 358 mm x 146 mm with hook and pins are part of the kit.



Trapezium


Base

To do and observe :
Step 1 :
Take one trapezium and fix it to the base using pins as shown below. Call it as ABCD. Here

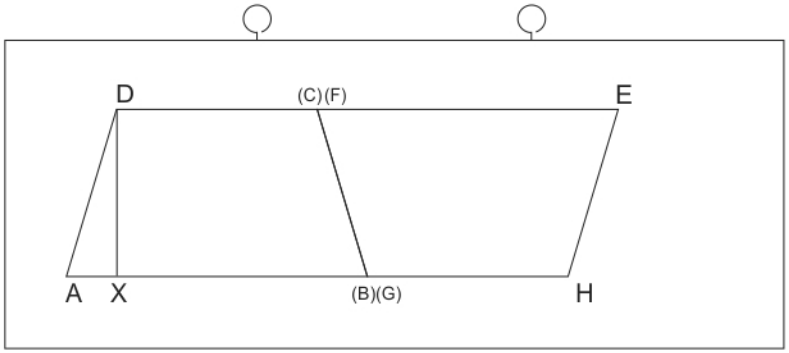


AB = a

DC = b

DX = h (Height)

Step 2 :
Take another trapezium and fix it beside to the first trapezium as shown below, so that together they can form a parallelogram.



Now with scale verify that opposite sides are equal and hence quadrilateral AHED is a parallelogram.

So, Area of Trapezium = 1/2 (Area of parallelogram AHED)
= 1/2 (AH) x (DX)
= 1/2 (AB+BH) (DX)
= 1/2 (a+b) h

Result :
Area of Trapizium = 1/2 (sum of parallel sides) (height)