

The JETS Challenge

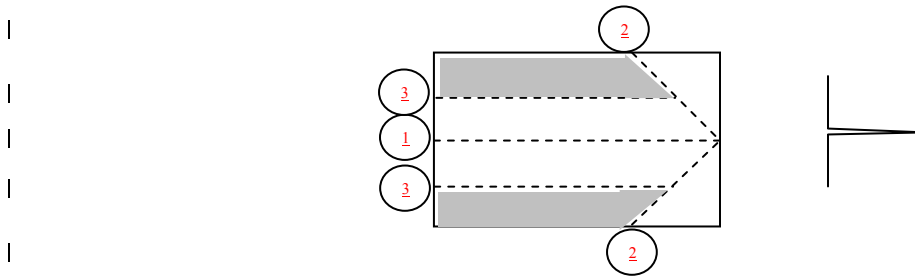
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Challenge 46 – The Paper Airplane Challenge

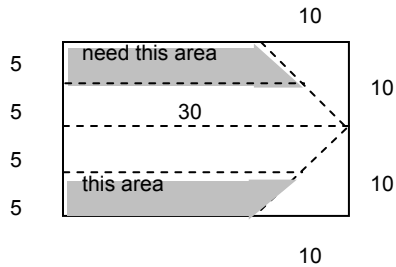
Problem:

A paper airplane is made from a sheet of 20×30 cm paper using the double fold method (always to the center). The wings are folded to be parallel to the bottom of the plane.

What is the shaded wing area (cm^2)?



Solution:



$$Area = \frac{1}{2}(b_1 + b_2) \cdot h$$

$$b_1 = 20$$

$$h = 5$$

$$b_2 = ?$$

$$b_2 = 25$$

So, Area (1 wing)

$$= \frac{1}{2}(20 + 25) \cdot 5$$

$$= \frac{1}{2}(45) \cdot 5$$

$$= 112.5 \text{ cm}^2$$

$$2 \text{ wings} = 225 \text{ cm}^2$$

$$\text{Top + bottom of wings} = 225 \cdot 2 = 450 \text{ cm}^2$$