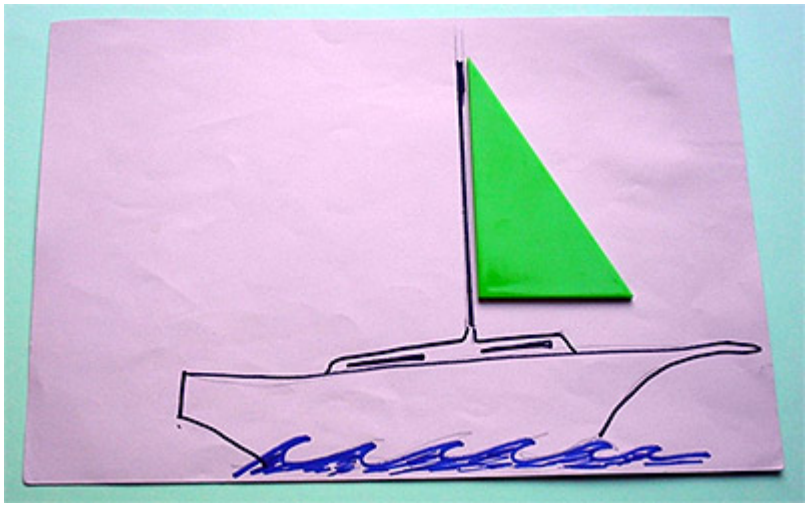
Sail for the yacht

Annotation

Mari understands that two right-angled triangles will combine to form a rectangle. She uses this knowledge to determine the area of one triangle by calculating the area of the rectangle and dividing that area by 2. She has “discovered” this relationship and is able to describe her understanding in words: she is not applying a memorised formula. Mari appropriately writes cm squared as the unit in her answer.

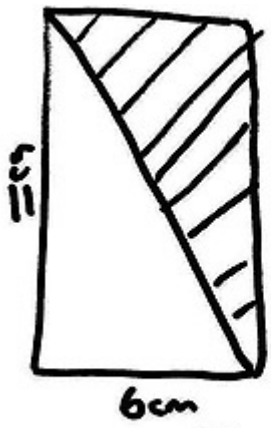
Problem: Sail for the yacht

The teacher shows the student a line drawing of a yacht with a cardboard right-angled triangle forming a sail. The teacher tells the student that the yacht needs a second identical sail and asks the student to use the existing sail to calculate the area of the sail so that they can determine the amount of cloth required.



Student Response

Mari draws around the cardboard sail then flips the cardboard sail over to form a rectangle and draws around its two remaining sides. She measures the two sides with a ruler.



$11 \times 6 = 66$

$66 \div 2 = 33cm^2$

I ~~had~~ added both triangles added together to make a rectangle and went 11 times 6 = 66 then took half of the rectangle away to make a triangle and ~~then~~ divided 66 by 2 to make $33cm^2$