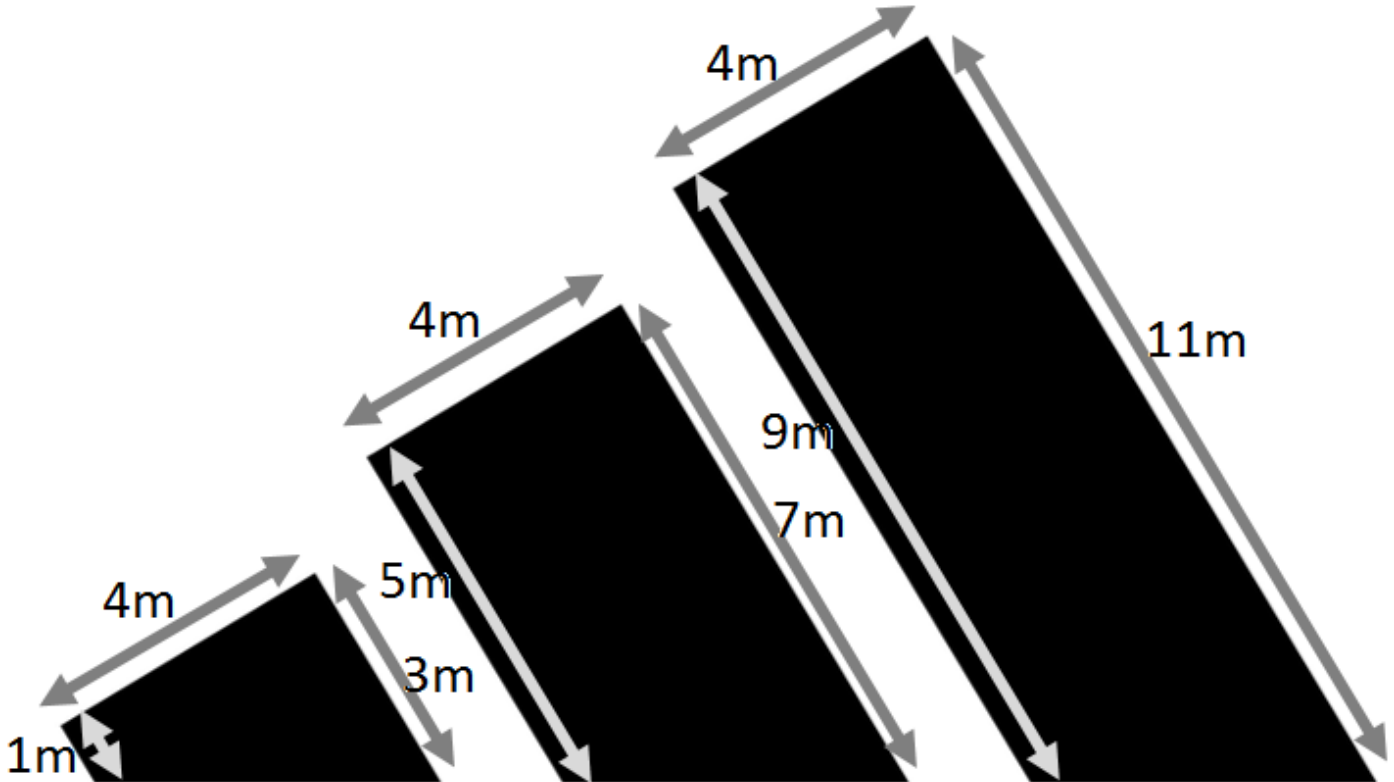


## Adidas Area

Part of the Adidas logo is to be painted onto the wall of a building.



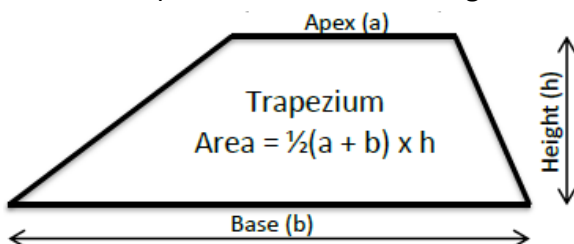
The dimensions are given below:



Use the measurements given above to calculate:

- 1) The area of the smallest trapezium. *You may use the trapezium rule below or split into a rectangle and a triangle.*
- 2) The total area of the three stripes.
- 3) The amount of paint required, given that one litre covers  $8m^2$ .
- 4) The cost of the paint required, given that 5-litre tins cost £14.99.

The area of a trapezium:  $Area = Average\ Width \times Height$ . Average width is:  $\frac{Top\ Width + Bottom\ Width}{2}$



This formula is sometimes written as:

$$Area = \left(\frac{a + b}{2}\right) h$$

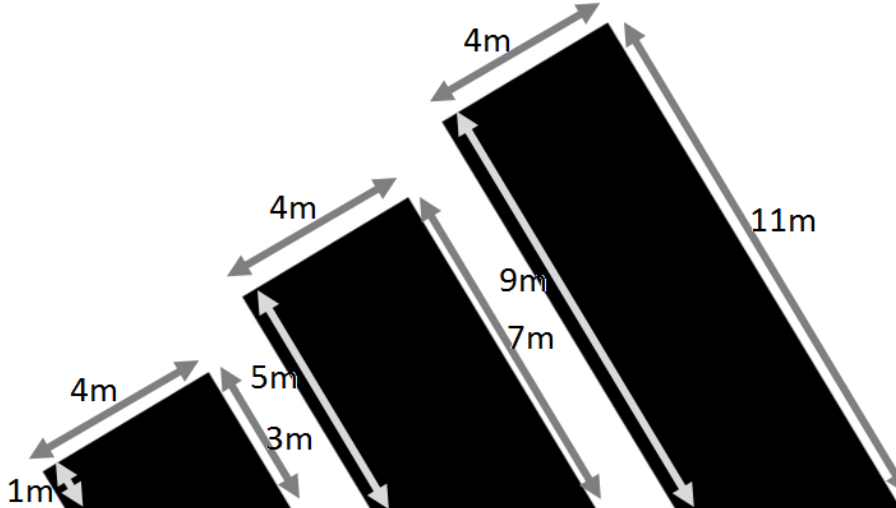
Where  $a$  is the width of one of the parallel lines,  $b$  is the width of the other, and  $h$  is the height.

# Adidas Area SOLUTIONS



Part of the Adidas logo is to be painted onto the wall of a building.

The dimensions are given below:



Use the measurements given above to calculate:

1) The area of the smallest trapezium. *You may use the trapezium rule below or split into a rectangle and a triangle.*

$$\left(\frac{1+3}{2}\right) \times 4 = 8m^2 \quad \text{OR} \quad 4 \times 1 + \frac{1}{2}(4 \times 2) = 4 + 4 = 8m^2$$

2) The total area of the three stripes.

$$8 + \left(\frac{5+7}{2}\right) \times 4 + \left(\frac{9+11}{2}\right) \times 4 = 8 + 24 + 40 = 72m^2$$

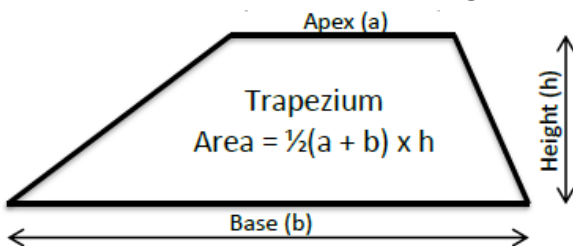
3) The amount of paint required, given that one litre covers  $8m^2$ .

$$\frac{72}{8} = 9 \text{ litres}$$

4) The cost of the paint required, given that 5-litre tins cost £14.99.

$$9 \text{ litres requires 2 tins: } 2 \times 14.99 = \text{£}29.98$$

The area of a trapezium:  $\text{Area} = \text{Average Width} \times \text{Height}$ . Average width is:  $\frac{\text{Top Width} + \text{Bottom Width}}{2}$



This formula is sometimes written as:

$$\text{Area} = \left(\frac{a+b}{2}\right) h$$

Where  $a$  is the width of one of the parallel lines,  $b$  is the width of the other, and  $h$  is the height.