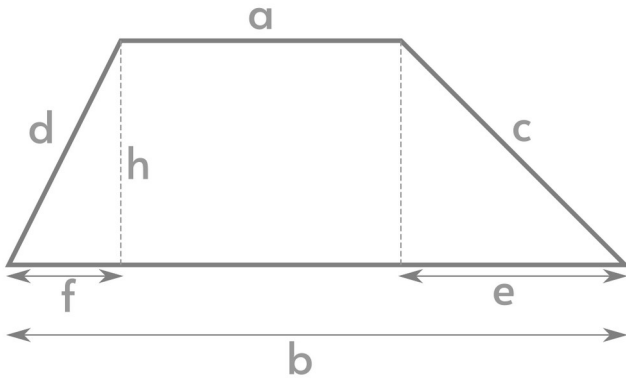


AREA OF A TRAPEZIUM

This trapezium can be split into two right-angled triangles and one rectangle. Let's calculate its area by using each of those shapes separately.



1. Write the formulae for the areas of the two triangles and the rectangle that compose the trapezium.

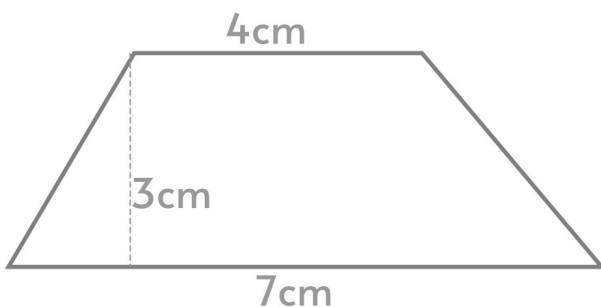
Left triangle:

Right triangle:

Rectangle:

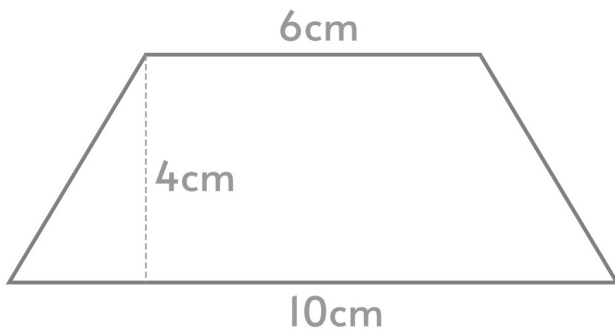
2. Add the expressions together to get a formula for the area of the trapezium. Tweak your formula so that the length b appears in it. If needed check hint 1 at the end of the worksheet.

3. What is the area of this trapezium?



4. Draw three different trapeziums that have bases of 3cm and 5cm, and a height of 2cm. What are the areas of these trapeziums?

5. Calculate the area of this trapezium



6. A rectangle has the same height (4cm) and same area as the previous trapezium. What is its length? How does this compare to the lengths of the bases of the trapezium?

7. Draw two different trapeziums that have an area of 10cm^2 . Write down the lengths of their bases and height.

Hint 1: first factorise the expression by putting $h/2$ in front of the brackets, then look for a sum of lengths that is equal to b .