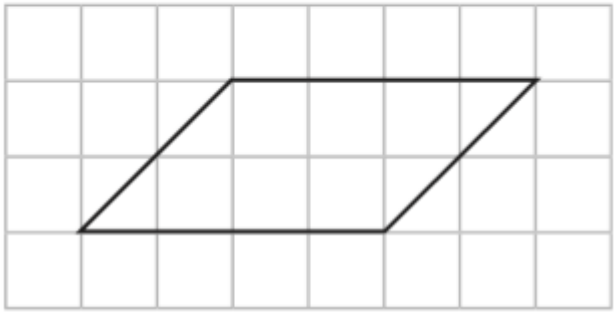
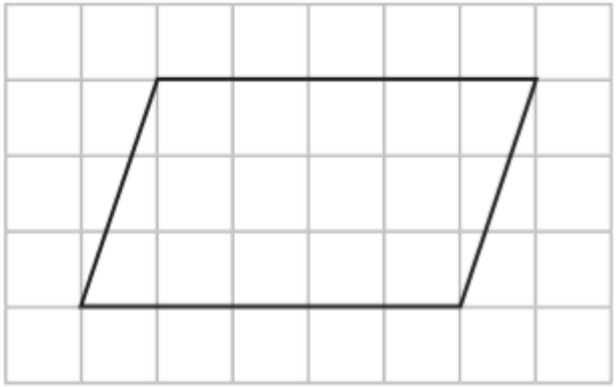
Use the formula **base × height** to calculate the area of a parallelogram.

1) Find the area of each parallelogram.

a)

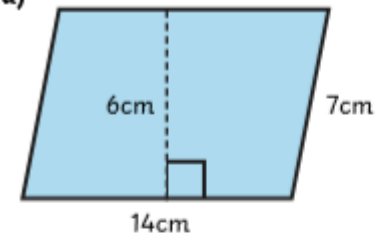


b)

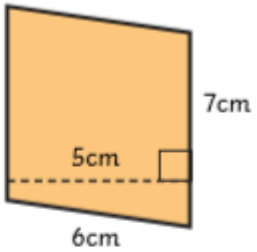


2) Calculate the area of each parallelogram.

a)

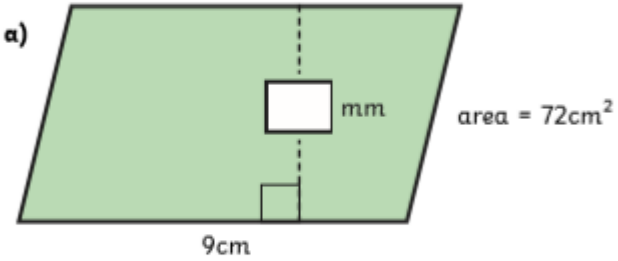


b)

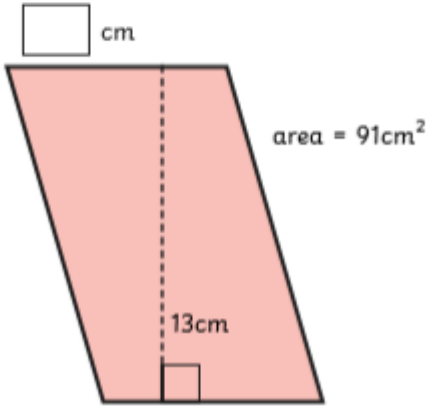


3) Calculate the missing measurements for these parallelograms.

a)

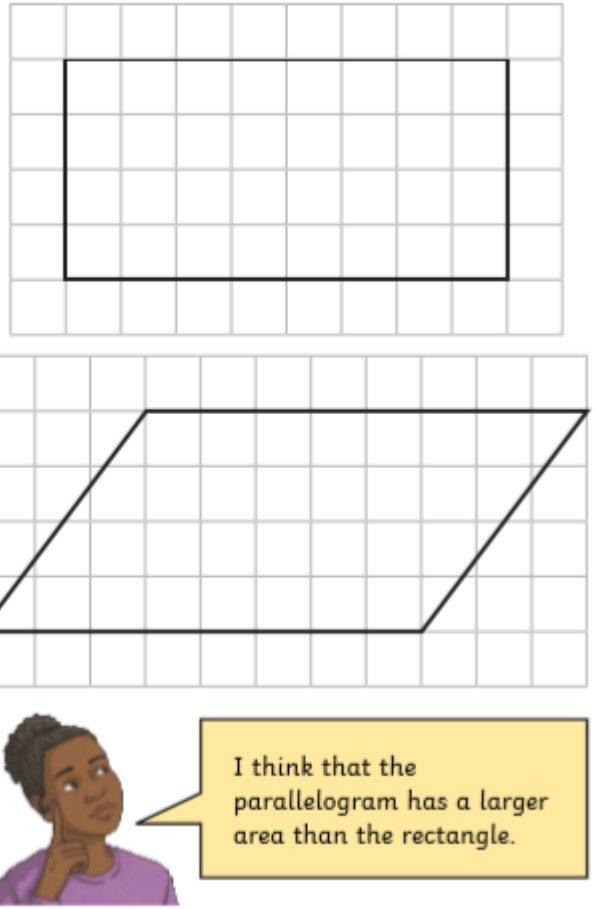


b)



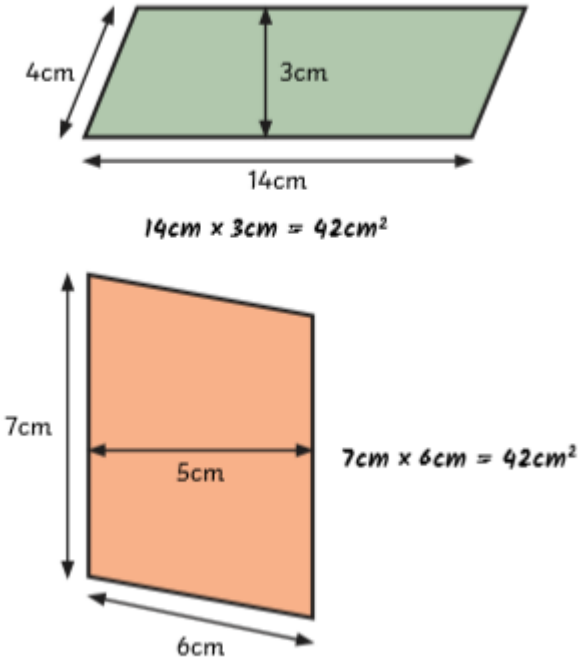
Use the formula **base × height** to calculate the area of a parallelogram.

1) Ania has been counting squares to find the area of these shapes.



Is Ania correct? Explain to Ania how to check if she is correct by using a calculation.

2) Hamish has worked out that each parallelogram has an area of $42cm^2$.



Do you agree with Hamish? Explain why.

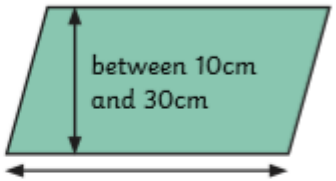
Use the formula **base × height** to calculate the area of a parallelogram.

1) I am thinking of a parallelogram with side lengths that are whole numbers.

It has an area of $84cm^2$.

Its height measures between 10cm and 30cm.

Its base measures between 2cm and 10cm.



Give the dimensions of all the possible parallelograms I could be thinking of.

2) DIY Dan is decorating his bathroom with these tiles:

One wall of his bathroom has an area of $4800cm^2$.

a) How many tiles will DIY Dan need to decorate this wall?

b) DIY Dan spends another £175 decorating the rest of his bathroom with tiles. How many more tiles did DIY Dan use?

1) a) $4 \times 2 = 8cm^2$

b) $5 \times 3 = 15cm^2$

2) a) $14cm \times 6cm = 84cm^2$

b) $7cm \times 5cm = 35cm^2$

3) a) 80mm

b) 7cm

1) Ania is incorrect. Using the formula base x perpendicular height to calculate the area of both the rectangle and the parallelogram will show Ania that both shapes actually have the same area of $32cm^2$.

2) No. Although Hamish has correctly calculated that the first parallelogram has an area of $42cm^2$, in the second parallelogram he has multiplied the base by a side length, rather than the perpendicular height. The correct area of the second parallelogram is $7cm \times 5cm = 35cm^2$ so both of these parallelograms do not have an area of $42cm^2$.

1) The parallelogram has an area of $84cm^2$ so it could have the following dimensions:

base = b and height = h
b = 3cm and h = 28cm
b = 4cm and h = 21cm
b = 6cm and h = 14cm
b = 7cm and h = 12cm

a) Each tile has an area of $240cm^2$.
4800 ÷ 240 = 20
DIY Dan needs 20 tiles for this wall.

b) £175 ÷ £3.50 = 50
Dan used 50 more tiles to decorate the rest of his bathroom.