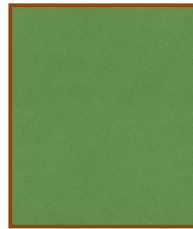


Recap activity

Old MacDonald wants to build a pen for sheep.

He needs some material to put around the outside of the pen. To work out how much material he needs for a **fence and a gate**, should he find the **perimeter** or the **area** of the pen?

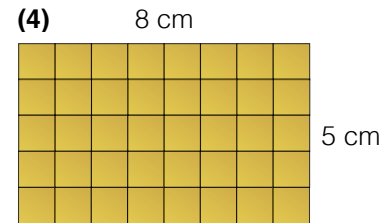
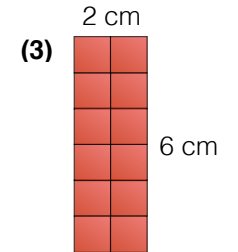
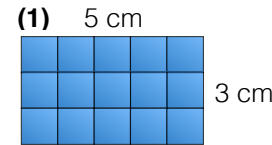
He also wants to buy some turf for the pen. To work out how much **turf** he needs, should he find the **perimeter** or the **area** of the pen?



α

Alpha Exercise

Find the area of each of the following rectangles:

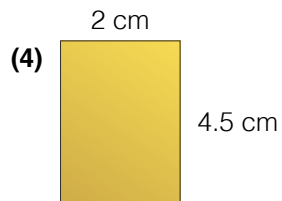
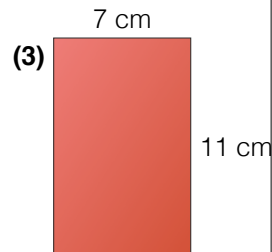
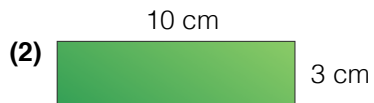
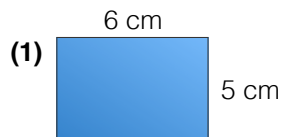


How many 2 x 1 cm tiles can you fit into each of these four rectangles?

β

Beta Exercise

Find the area of each of the following rectangles:

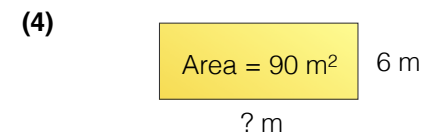
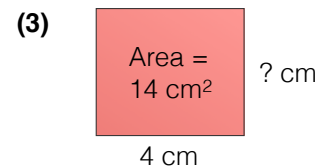
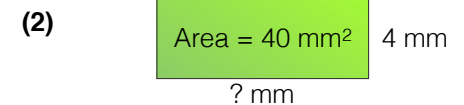
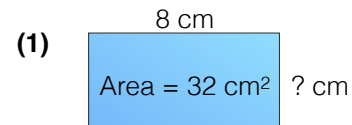


How many 2 x 1 cm tiles can you fit into each of these four rectangles?

γ

Gamma Exercise

Find the missing numbers:



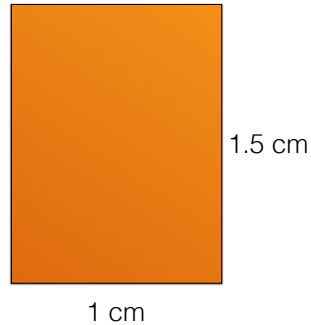
Sketch four different rectangles with an area of 24 cm². Label the lengths and widths of all four rectangles.



Explain the mistake

Dannii says that the area of this rectangle is 1 cm^2 because you can only fit one whole $1 \text{ cm} \times 1 \text{ cm}$ square into the rectangle.

Dannii is wrong about the area. Explain why.



Exam-style question 1

- What is the area of a rectangular patio measuring 25 feet wide and 30 feet long?
- How many 1 foot \times 1 foot slabs are needed to tile the patio?
- If each slab costs £5, how much would it cost to buy enough to tile the whole patio?



Exam-style question 2

- What is the area, in cm^2 , of a $1 \text{ m} \times 1 \text{ m}$ square?
- What is the area, in cm^2 , of a $50 \text{ cm} \times 50 \text{ cm}$ square?
- How many $50 \text{ cm} \times 50 \text{ cm}$ tiles are needed to cover a 1 m^2 area?
- How many $50 \text{ cm} \times 50 \text{ cm}$ tiles are needed to cover a rectangular room measuring $2 \text{ m} \times 4 \text{ m}$?



Challenge

You have 120 metres of fencing. You want to use this fencing to enclose a rectangle or square of the largest possible area. What are the dimensions of the shape you enclose?