

Power Up

Which numbers round to 3,000?



What are the smallest and largest numbers that round to 3,000 when you are rounding to the nearest 1,000?

What are the smallest and largest numbers that round to 3,000 when you are rounding to the nearest 100?

What are the smallest and largest numbers that round to 3,000 when you are rounding to the nearest 10?



I will use place value to help me find the correct numbers.

Answers

The smallest number that rounds to 3000 when rounding to the **nearest 1000** is **2500** and the largest number is **3499**.

The smallest number that rounds to 3000 when rounding to the **nearest 100** is **2950** and the largest number is **3049**.

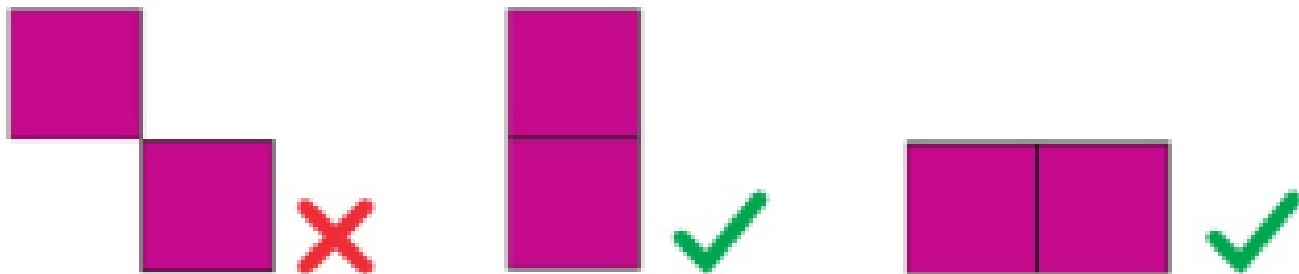
The smallest number that rounds to 3000 when rounding to the **nearest 10** is **2995** and the largest number is **3004**.

LO: To use area to make shapes

- What rectilinear shape of patio can you make with an area of 4 square slabs?
- How can you make sure you have found every possible shape?

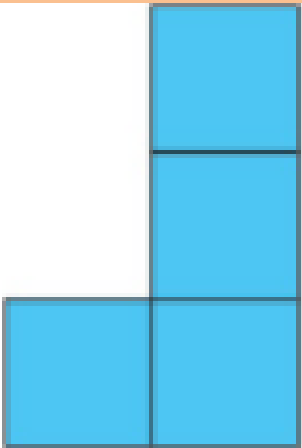
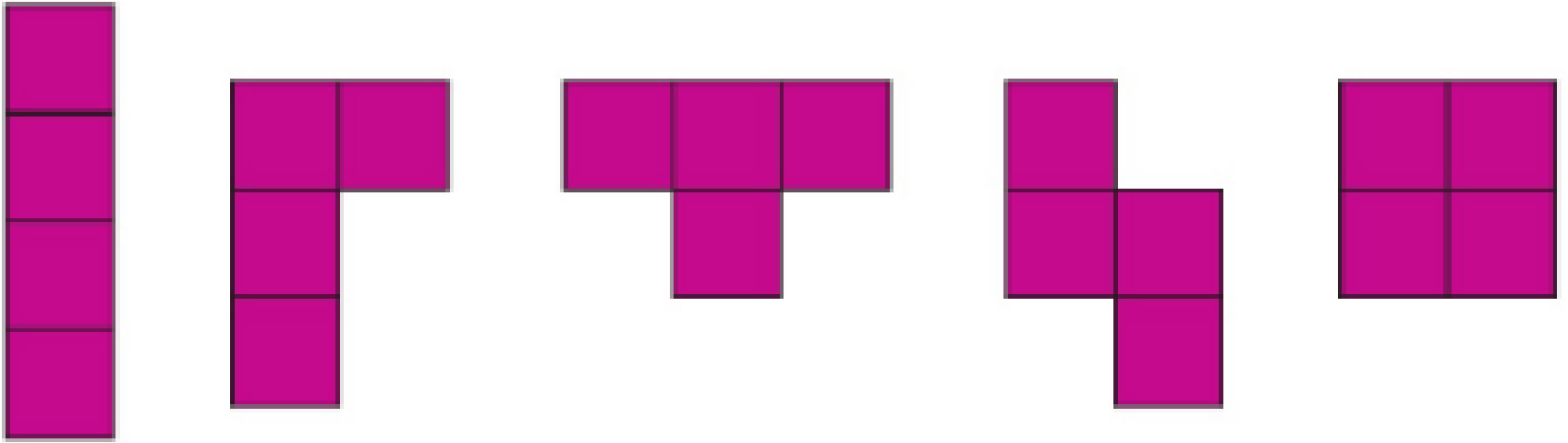


When squares are used to make a rectilinear shape, they should touch at the side, not just the corner.



LO: To use area to make shapes

- a) To show the patios with an area of 4 paving slabs, we can use 4 squares. They can be arranged in the following different ways.



Ben made this shape too. Is this different to the above shapes?

LO: To use area to make shapes

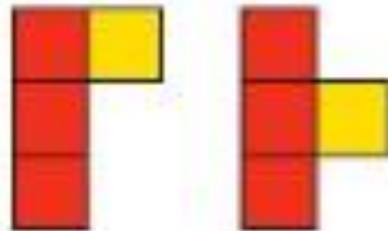
b) Here is one way to find every possible shape.

Make a chain
(shape 1)



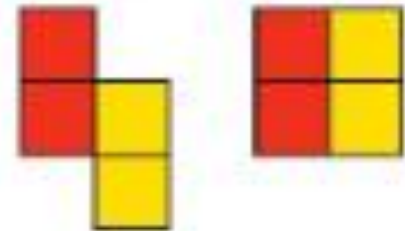
Move only 1 of the
squares to begin with.

(shapes 2 and 3)

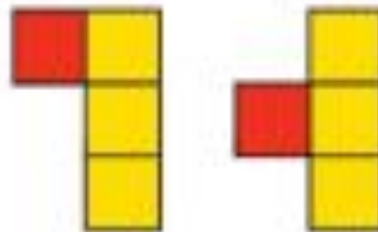


Then move 2 of the
squares at a time.

(shapes 4 and 5)



Moving 3 squares will not
make any new shapes.

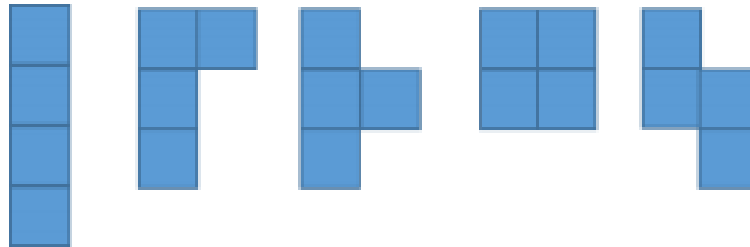


You might see other ways of moving
squares but if they make reflections
or rotations you do not count them!

LO: To use area to make shapes

Fluency

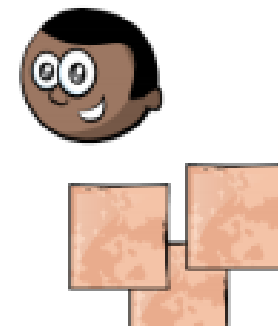
- Ron has 4 squares.
He systematically makes rectilinear shapes.



Use 5 squares to make rectilinear shapes.
Can you work systematically?

- Use squared paper to draw 4 different rectilinear shapes with an area of 12 squares.
Compare your shapes to a partner.
Are they the same?
Are they different?

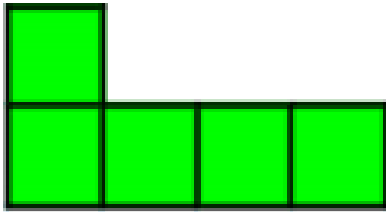
- Mo is building a patio made of 20 square slabs.
What could the patio look like?
Mo is using 6 black square slabs in his design.
None of them are touching each other.
Where could they be in the designs you have made?



LO: To use area to make shapes

Reasoning

Here is a rectilinear shape.



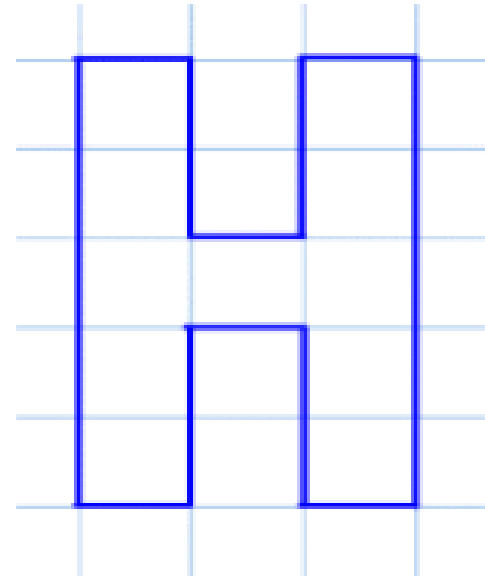
Using 7 more squares, can you make a rectangle?

Can you find more than one way?

If you don't have squared paper, you can cut out squares that are the same size and organise into letter.

Problem Solving

Can you make some capital letters on squared paper using less than 20 squares?



Make a word from some and count the total area of the letters.

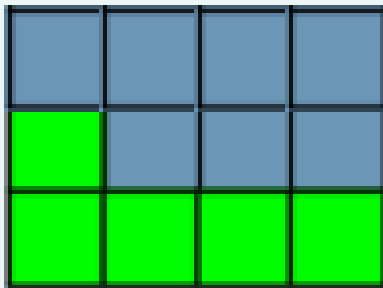
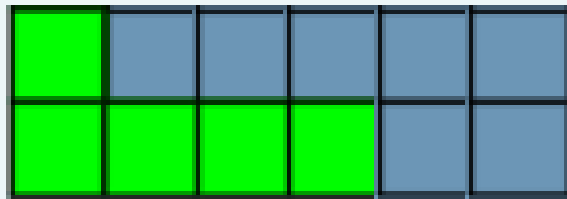
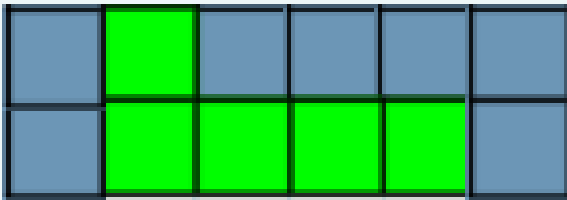
Which letters have a line of symmetry?

What is the area of half of each letter?

LO: To use area to make shapes

Reasoning

Possible answers include:



Problem Solving

Most letters can be made. They could be drawn on large squared paper or made with square tiles.