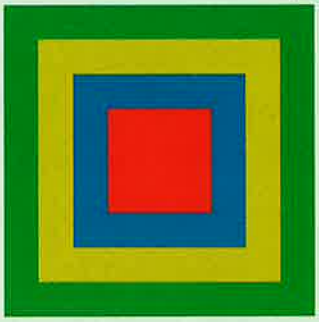
Squares inside squares

Challenge



Look at this square.

The area that is shaded **red** is 9 cm^2.

The perimeter of the **red** square is 12 cm.

What is the length of one side of the **red** square?

The length of each side of the **blue** square is 2 cm more than the **red** square.

What is the length of one side of the **blue** square?

What is the area of the square that is shaded **blue** and **red**?

What is the perimeter of the **blue** square?

The length of each side of the **yellow** square is 2 cm more than the **blue** square.

What is the length of one side of the **yellow** square?

What is the area of the square that is shaded **yellow**, **blue** and **red**?

What is the perimeter of the **yellow** square?

The length of each side of the **green** square is 2 cm more than the **yellow** square.

What is the length of one side of the **green** square?

What is the area of the square that is shaded **green**, **yellow**, **blue** and **red**?

What is the perimeter of the **green** square?

Explain how you worked out the lengths of the sides of each square and the squares' areas and perimeters.

Think about ...

What if?

What is the area of the square that is shaded **blue** only?

What is the area of the square that is shaded **yellow** only?

What is the area of the square that is shaded **green** only?

Explain how you worked out the area of each of the three colours.

When you've finished, turn to page 80.