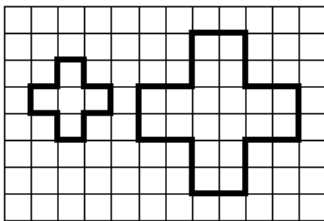


# Cross patterns

This task is about rules for growing number patterns.



A cross shape was drawn in different sizes. The first two are shown. The cross with a side length of 1 has an area of  $5 \text{ cm}^2$  and the cross with a side length of 2 has an area of  $20 \text{ cm}^2$ .

Here is a table for the area of crosses which have different side lengths.

Side length of the cross (in cm)	1	2	3	4	5	10
Area of the cross (in $\text{cm}^2$ )	5	20	45	80	125	500

a) Explain in your own words a rule for getting the area of a cross.

b) Complete this rule below relating the **area** ( $a$ ) of the cross to the length of the sides ( $n$ ).

$$a = \boxed{\phantom{000}} \text{ cm}^2$$