

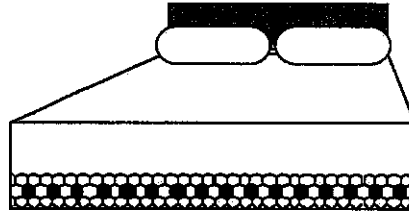
Patchwork Quilt

This problem gives you the chance to:


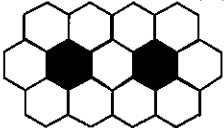
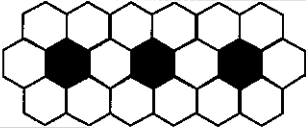
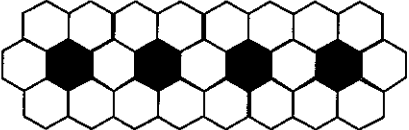
- recognize and extend a number pattern
- express a rule using algebra

Sam is making a border for a patchwork quilt.

She is sewing black and white regular hexagons together.



Sam makes a table to show the number of black and white hexagons she needs.

	Number of black hexagons	Number of white hexagons
	1	6
	2	11
	3	16
	4	21

1. How many white hexagons does Sam need for 6 black hexagons? _____

Explain how you figured it out.

2. How many black hexagons does Sam need for 66 white hexagons? _____

Explain how you figured it out.

3. Write a formula that will help you to find how many white hexagons (W) Sam needs for n black hexagons.

4. Use your formula to find how many white hexagons Sam needs for 77 black hexagons.

_____ white hexagons

Show your work.