(c) Write an expression for the number of **black** squares in the *n*th pattern.

(c) .... **[2]**

(d) Sally looks at the patterns.
She says

> If the pattern number is odd, the total number of squares will be odd.
> If it is even, the total number of squares will be even.

Explain clearly why Sally is right for **all** patterns in the sequence.

....

....

....

....

.... **[6]**