

# Diamond patterns

This task is about patterns and their rules.

Loretta made some patterns using green and white diamonds.



Pattern 1



Pattern 2



Pattern 3



Pattern 4

a) Complete the table below to show the number of green and white diamonds that each pattern would have.

Pattern Number ( $n$ )	1	2	3	4	5	6	...	10	25
Number of Green Diamonds, ( $b$ )	3	4	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>
Number of White Diamonds, ( $w$ )	4	6	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>		<input type="text"/>	<input type="text"/>

b) i) the number of green diamonds ( $b$ ) to the pattern number ( $n$ ).

$$b = \text{[input box]}$$

ii) the number of white diamonds ( $w$ ) to the pattern number ( $n$ ).

$$w = \text{[input box]}$$

c) What pattern number would Loretta have painted if the pattern had a total of 86 white diamonds?

Pattern number