Express 245 as a product of prime factors in the form $2^{a} \times 3^{b} \times 5^{c} \times 7^{d}$. What are the values a, $b, c$ and $d$ ?

Here is a pattern made from dots:

a) What is the nth term?
b) Which pattern will have 46 dots?
a) Express the perimeter in terms of $b$ and $c$.
b) If the perimeter is 42 cm . Find the value of $b$ when $c=2$.


## Expand:

a) $(2 x-5)^{2}$

Factorise:
b) $\left(6 z^{2}+24 z\right)$

Solve: $6 x+3=10 x-5$

Find the value of $a$ and $b$


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