

In Section 4.2 we prove by induction that the number of lines printed by a call to $interval(c)$ is $2^c - 1$. Another interesting question is how many dashes are printed during that process. Prove by induction that the number of dashes printed by $interval(c)$ is $2^{c+1} - c - 2$.

Base case:

$$interval(n) = 2^{n+1} - n - 2$$

$$interval(1) = 2^2 - 1 - 2 = 1$$

$$interval(2) = 2^3 - 2 - 2 = 4$$

Hypothesis:

$$interval(n+1) = 2 \cdot interval(n) + n + 1$$

$$= 2 \cdot (2^{n+1} - n - 2) + n + 1$$

$$= 2 \cdot 2^{n+1} - 2n - 4 + n + 1$$

$$= 2^{(n+1)+1} - n - 4 + 1$$

$$= 2^{(n+1)+1} - (n+1) - 4$$

why it is 4 not 2 :c help pls

