1. Imagine a tree that each year grows 3 new branches from the end of each existing branch. Assuming that your tree is a single stem when it is planted:
$a_{1}$. How many new branches would you expect to appear in the first year of new growth?
$a_{2}$. How many new branches would you expect to appear in the second year of new growth?
b. Write a function rule and a recursive rule that relates the number of new branches to the year of growth.
c. In what year will the number of new branches first be greater than 15000 ?

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