Geometric Sequences

A French pastry called *mille feuille* (or "thousand layers") is made from dough rolled into a square, buttered, and then folded into thirds to make three layers. This process is repeated many times. Each step of folding and rolling is called a turn.

How many turns are required to get to more than 1000 layers?

Write out the terms that make up the sequence in this question.

What did you do to each term to get to the next term?

This amount is called the **common ratio, r**.

A **geometric sequence** is formed by multiplying each term by r to get the next term.

In the *mille feuille* example the first term is 1. So a = 1.

Write equations for each of the following terms, using a and r (instead of numbers):

$t_2 =$

$t_3 =$

$t_4 =$

$t_n =$