Concept – Making and Graphing Geometric Sequences

We have been working with arithmetic sequences recently, where each term is made by adding a value to the previous term. We will now move onto **geometric sequences**, in

which each term is made by _____

Where arithmetic sequences have a common difference, geometric sequences have a

_____

The equation for the common ratio is

$$r = \frac{t_{n+1}}{t_n}$$

How to

Eg1: Calculate the common ratio in the geometric sequence 18144, 3024, 504, 84,...

Eg2: Show that the sequence 4, 10, 25, 62.5,... is geometric.

There is a simple approach to making arithmetic sequences on your calculator.

a. Start a new _____ page.

b. Type the first term and press enter.

c. Press _____ then multiply the common ratio.

d. Continue to press enter to make the next term in the sequence.

Worked Example
Find or make up a sequence. Prove that this sequence is geometric and find a late term (t_{10})