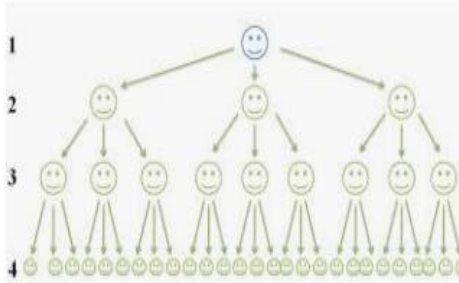


Goals



This week:

- Use recursion to generate a geometric sequence
- Display the terms of a geometric sequence in both tabular and graphical form and demonstrate that geometric sequences can be used to model exponential growth and decay in discrete situations
- Deduce a rule for the n th term of a particular geometric sequence from the pattern of the terms in the sequence, and use this rule to make predictions

Theoretical Components

Resources:

For this week the theory work is in the *PDF file*:
Week 6 Notes & Exercises

What is a geometric sequence?

<https://www.youtube.com/watch?v=1z8QKFFU3Hc>

Sum of an arithmetic sequence:

$$S_n = \frac{n}{2}[2a + (n - 1)d]$$

Geometric progressions:

$$t_n = ar^{n-1}$$

Knowledge Checklist

- Adding terms of an arithmetic sequence
- Arithmetic series
- Multiplying terms
- Geometric sequences

Practical Components

There are questions to be answered in the booklet
Week 6 Notes & Exercises

Investigation

On HawkerMaths and attached to this week's work

On-line Quiz

None