



SCOPE & SEQUENCE
GR. 10 – MATH 10P



Student Task

GRADE 10: Math 10P, Plan #1

STRAND: Patterns and Relations (Patterns)

TASK: Arithmetic and Geometric Sequences

PRODUCTIVITY TOOL: Spreadsheet

TIMELINE: 1 Class for Arithmetic Sequences, 1 Class for Geometric Sequences

LEVEL OF DIFFICULTY: ☺ Easy

Students will be asked to use spreadsheet to generate terms of an Arithmetic or a Geometric Sequence. Students will use recursive formulae to generate the next term in a sequence. They will also find the sum of terms of an Arithmetic Sequence.

<u>Term Number</u>	<u>Term</u>	<u>Sum</u>
1	4	4
2	8	12
3	12	24
4	16	40
5	20	60
6	24	84
7	28	112
8	32	144
9	36	180
10	40	220
11	44	264
12	48	312
13	52	364



ICT Outcomes

The learner will:

- C6** 4.1 investigate and solve problems of prediction, calculation and inference
- 4.2 investigate and solve problems of organization and manipulation of information
- 4.4 generate new understandings of problematic situations by using some form of technology to facilitate the process
- F1** 4.1 assess the strengths and weaknesses of computer simulations in relation to real-world problems
- 4.2 solve mathematical and scientific problems by selecting appropriate technology to perform calculations and experiments
- 4.3 apply terminology appropriate to technology in all forms of communication
- 4.4 demonstrate an understanding of the general concepts of computer programming and the algorithms that enable technological devices to perform operations and solve problems
- P2** 4.1 manipulate and present data through the selection of appropriate tools, such as scientific instrumentation, calculators, databases and/or spreadsheets






Curriculum Outcomes

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General Outcome

 Generate and analyze number patterns.

Specific Outcomes

- P2-2 Generate number patterns exhibiting arithmetic growth.
- P2-3 Use expressions to represent general terms and sums for arithmetic growth, and apply these expressions to solve problems
- P2-4 Relate arithmetic sequences to linear functions defined over the natural numbers.
- P2-5 Generate number patterns exhibiting geometric growth.

