1.2 Arithmetic sequences and series

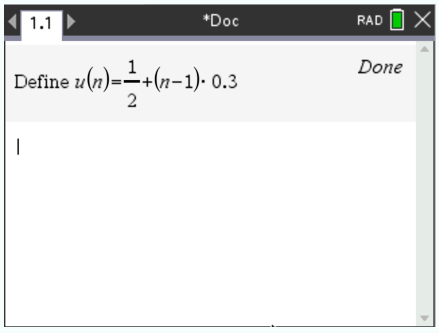
1.2.1 Enter a sequence on your calculator

Suppose you want to enter the sequence $u_n = \frac{1}{2} + (n-1) \cdot 0.3$ on your calculator.

① Create a new document, press menu and select Add Calculator.

② Press menu, select Actions > Define.

③ Type $u(n) =$, then write the expression of the sequence



1.2.2 Enter a sequence on your calculator (recursive definition)

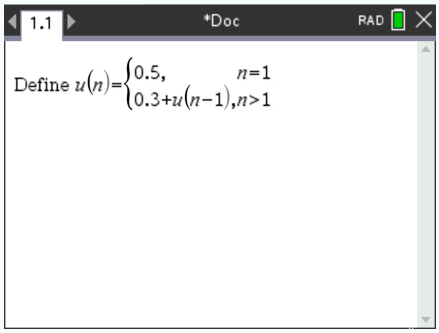
Suppose you want to enter the sequence $u_n = 0.3 + u_{n-1}$, with $u_1 = 0.5$ on your calculator.

① Create a new document, press menu and select Add Calculator.

② Press menu, select Actions > Define.

③ Type $u(n) =$, press and select

④ On the first line, write the initialization. On the second line, write the recursive expression.



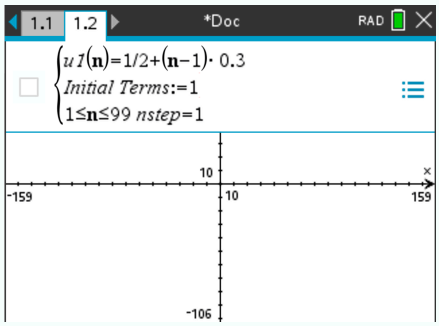
1.2.3 Graph a sequence

Suppose you want to display the graph of the sequence $u_n = \frac{1}{2} + (n-1) \cdot 0.3$ on your calculator, starting at $n = 1$ and ending at $n = 20$.

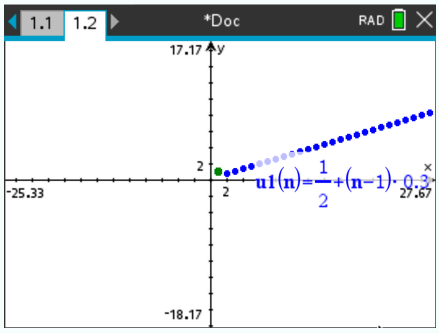
① Create a new document, press menu and select Add Graphs.

② Press menu, select Graph Entry/Edit > Sequence > Sequence

③ In the first line, write the expression of the sequence. In the second line, write the number of initial terms.



④ Press enter and the graph of the sequence is displayed.

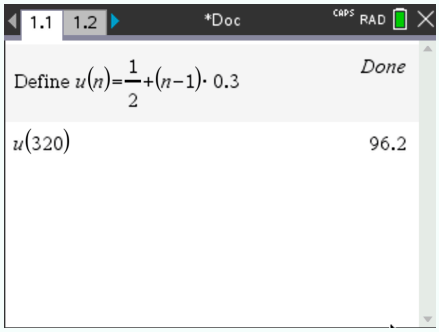


1.2.4 Compute a term of a sequence

Suppose you want to know the 320^{th} term of the sequence $u_n = \frac{1}{2} + (n-1) \cdot 0.3$.

① Enter the sequence on your calculator (see ③)

② Press enter and write $u(320)$ in the following line.

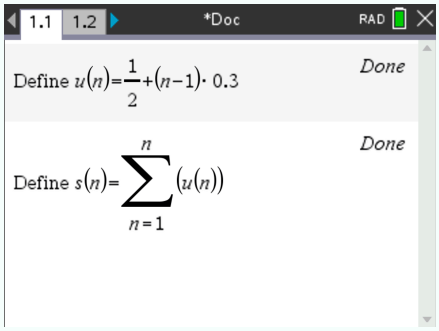


1.2.5 Graph a series

Suppose you want to graph the series of the sequence $u(n) = \frac{1}{2} + (n-1) \cdot 0.3$ on your calculator, starting at $n = 1$ and ending at $n = 20$.

① Enter the sequence on your calculator (see ③)

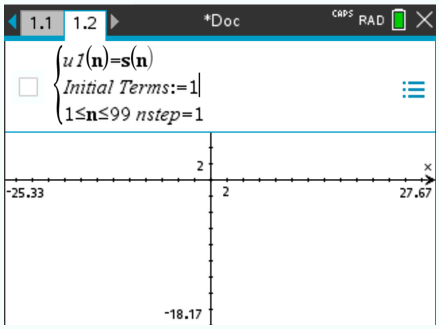
② Enter the series of the sequence in the line below



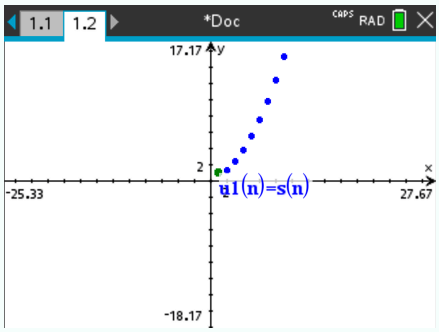
③ Create a new document, press menu and select Add Graphs.

④ Press menu, select Graph Entry/Edit > Sequence > Sequence

⑤ In the first line, write $s(n)$. In the second line, write the number of initial terms.



⑥ Press enter and the graph of the serie is displayed



1.2.6 Compute the value of a series

1. Enter the sequence on your calculator (see ③)

2. Enter the series of the sequence in the line below.

3. Type $s(20)$ to set the ending of the serie at 20. Press enter. The result should be 67.