

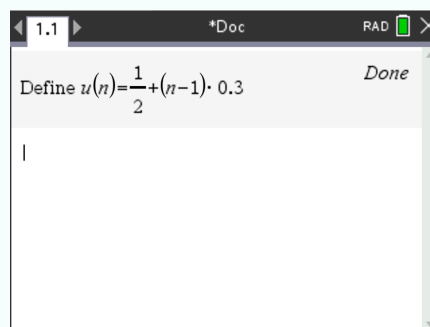


1.2 Arithmetic sequences and series

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.

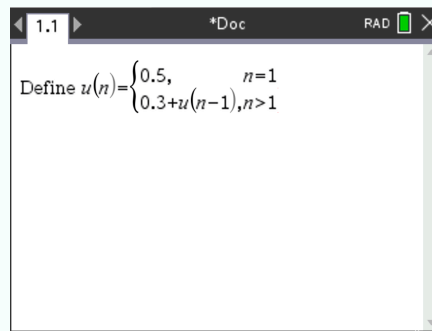
- ① Create a new document, press  and select Add Calculator.
- ② Press , select Actions > Define.
- ③ Type $u(n) =$, then write the expression of the sequence



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.

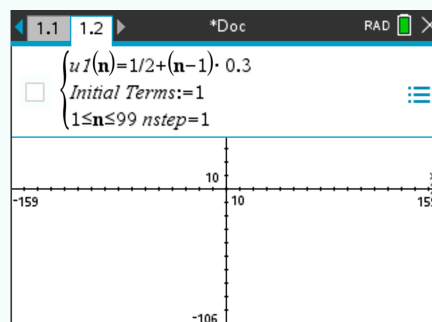
- ① Create a new document, press  and select Add Calculator.
- ② Press , select Actions > Define.
- ③ Type $u(n) =$, press  and select .
- ④ On the first line, write the initialization. On the second line, write the recursive expression.



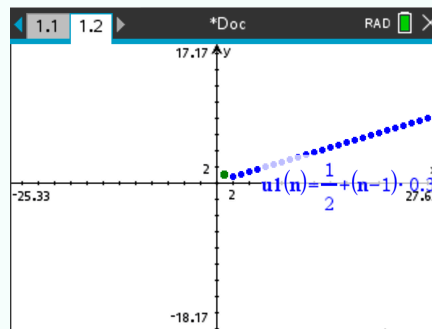
1.2.3 Graph a sequence

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  and select Add Graphs.
- ② Press , 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.




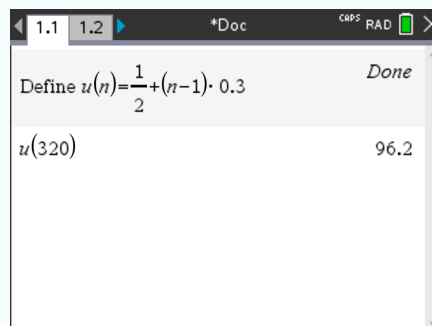
- ④ Press  and the graph of the sequence is displayed.



1.2.4 Compute a term of a sequence

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

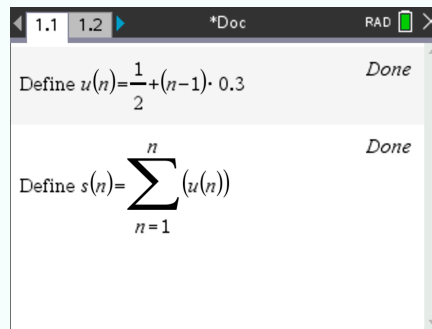
- ① Enter the sequence on your calculator (see ③)
- ② Press  and write $u(320)$ in the following line.





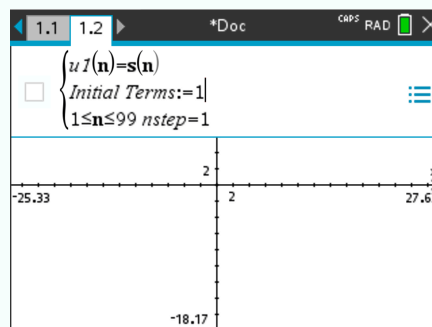
1.2.5 Graph a series

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 $n = 20$.

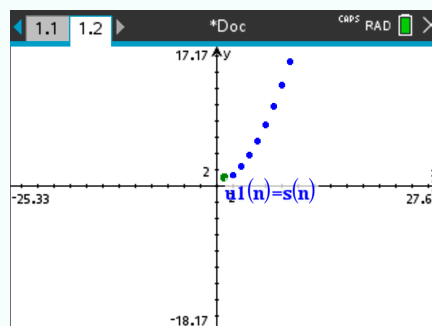
- ① Enter the sequence on your calculator (see ③)
- ② Enter the series of the sequence in the line below



- ③ Create a new document, press  and select Add Graphs.
- ④ Press , select Graph Entry/Edit > Sequence > Sequence
- ⑤ In the first line, write $s(n)$. In the second line, write the number of initial terms.




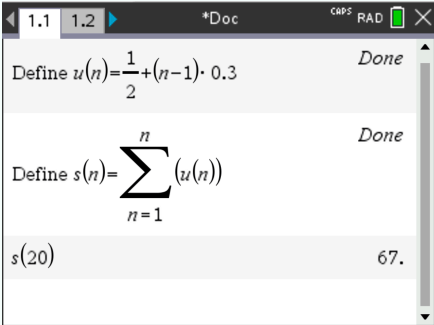
- ⑥ Press  and the graph of the serie is displayed



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 . The result should be 67.



The image shows a TI-NSPIRE CX calculator screen with the following content:

- At the top, there are tabs for 1.1 and 1.2, and a document icon labeled *Doc. On the right, there are icons for CAPS, RAD, and a green square.
- The first line shows the definition of a sequence: $u(n) = \frac{1}{2} + (n-1) \cdot 0.3$. To the right of this line is the word "Done".
- The second line shows the definition of the sum of the sequence: $s(n) = \sum_{n=1}^n u(n)$. To the right of this line is the word "Done".
- The third line shows the calculation of the sum at $n=20$: $s(20)$. To the right of this line is the result "67.".