

Example 2: chicken fence

Numerical approach – long version

Open a new document and add a page from the application **Lists & Spreadsheet**.

	A	B	C	D	E	F	G	H	I
1									
2									
3									
4									
5									
6									

Go to the cell which is shown on the right and activate it by pressing [•]. Enter the seq command:

[=, S, E, Q, (N, p, 1, 0,,
N,,, 0,,, 1, 0, 0,)]

This command means that a sequence with a total of 101 sequence elements is generated. The term of the sequence consists of the number of each following sequence element divided by 10. In this case the following sequence will be produced:

0, 0.1, 0.2, ... 10

Pressing [•] to insert the formula.

You may receive decimals instead of fractions. In this case you can - if desired - change the document settings: [⌘, 8, 1: document settings]. Change this setting to Auto or Approximate.

In column B the remaining length of fence should now be calculated. You have to subtract the value from column A from 10, because the length of the fence was set at 10. Create a new formula column in column B:

[=, 1, 0, -, A, /, (]

Pressing [•] to confirm the formula.

	A	B	C	D	E	F	G	H	I
1	=seq($\frac{n}{10}$, n, 0, 100)								
2									
3									
4									
5									

	A	B	C	D	E	F
	=seq($\frac{n}{10}$, n, 0, 100)					
1		0.				
2		.1				
3		.2				
4		.3				
5		.4				
6						

Pressing [•] to confirm the formula.

The screenshot shows a TI-84 Plus calculator screen. At the top, the title '1.1 BOG APPRX REELL' is displayed. Below the title, a sequence definition is entered: $\diamond = \text{seq}(n/10, n, 0, 100) = 10 -$. To the right of the definition, a cursor is positioned over a button that looks like a right arrow with a vertical line and a small '1' (likely the '1/2' or '1/x' button). Below the definition, a table of values is displayed. The table has six columns labeled A, B, C, D, E, and F. The rows are numbered 1 through 5. The values in the table are as follows:

	A	B	C	D	E	F
1	0.	10.				
2	.1	9.9				
3	.2	9.8				
4	.3	9.7				
5	.4	9.6				

At the bottom of the screen, a formula is entered: $C = \frac{b[0]}{2}$.

Confirm this entry by pressing [•].

1.1 BOG APPRX REELL

	A	B	C	D	E	F
	=seq(n/10,n,0,100)	=10-	=b[]/2			
1		0.	10.	5.		
2		.1	9.9	4.95		
3		.2	9.8	4.9		
4		.3	9.7	4.85		
5		.4	9.6	4.8		
6		.5	9.5	4.75		

D = a[] - c[]

The maximum can now be found in column D. The problem is solved.

1.1		BOG APPRX REELL			
	A	B	C	D	E
	$\text{seq}(n/10, n, 0, 100)$	$= 10 - a[]$	$= b[]/2$	$= a[] * c[]$	
50	4.9	5.1	2.55	12.495	
51	5.	5.	2.5	12.5	
52	5.1	4.9	2.45	12.495	
53	5.2	4.8	2.4	12.48	
54	5.3	4.7	2.35	12.455	
55	5.4	4.6	2.3	12.42	
56					
D51	=12.5				