

## How to Do Page 11 Example 1 Using TI-83/84

Use the TI-83/84 to calculate the sixth term for  $t_n = 7n + 5$ .

### Method A: Use the Sequence Function

1. From the home screen, press **CLEAR** and then press **2nd** **STAT**. You are now in the LIST screen. See Figure 1.

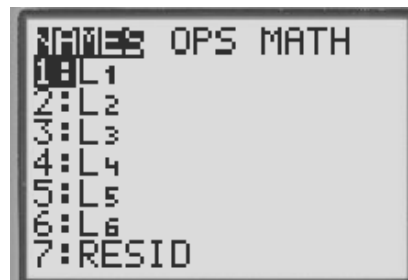


Figure 1

2. Move the cursor to OPS and press **ENTER**. See Figure 2.

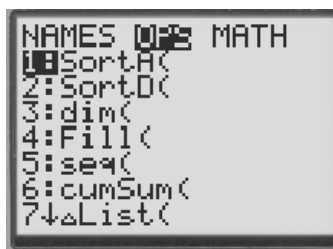


Figure 2

3. Move the cursor to 5:seq( and press **ENTER**.
  - Enter information about the sequence using the following syntax:  
seq(expression, variable, starting value of variable, ending value of variable, increment of variable)  
Note: X is usually chosen for the variable.
  - To generate terms 6 to 10, press the following, as shown in Figure 3.

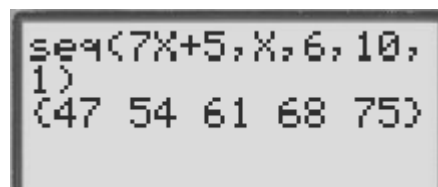


Figure 3

7 **X,T,Θ,n** **+** 5 **,** **X,T,Θ,n** **,** 6 **,** 10 **,** 1 **ENTER**



**Method B: Use the Sequence Mode**

1. Press **MODE**.
2. Move the cursor to SEQ and press **ENTER**. See Figure 4.
3. Press **Y=**. You can now enter up to three sequences called u, v, and w. See Figure 5.

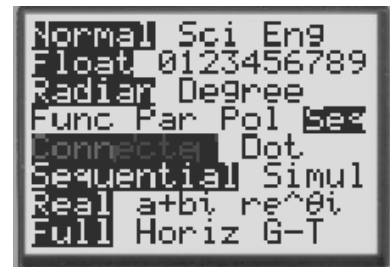


Figure 4

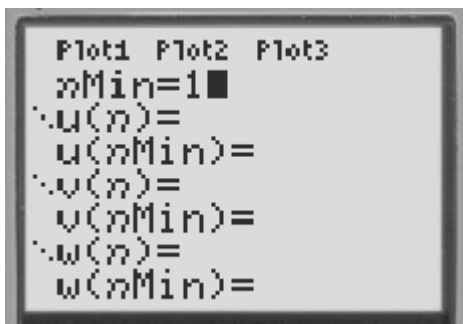


Figure 5

- Typically the sequence is entered as sequence u, where  
 $n\text{Min}$  = the smallest value for  $n$  ( $n\text{Min}$  is usually set to 1.)  
 $u(n)$  = the expression for the sequence you wish to enter  
 $u(n\text{Min})$  = the starting value of the sequence
- Enter the following values. See Figure 6.
  - Move the cursor to the line  $n\text{Min}$  and press **1** **ENTER**.
  - On the line  $u(n) =$ , press **12** **+** **(** **X,T,θ,n** **-** **1** **)** **×** **7** **ENTER**.
  - On the line  $u(n\text{Min}) =$ , press **12** **ENTER**.

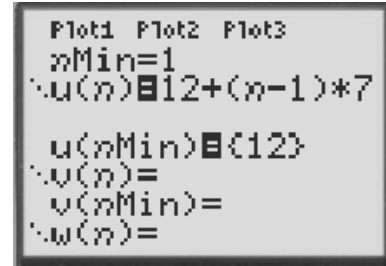


Figure 6

4. To generate a table of the sequence, press **2nd** **GRAPH** as shown in Figure 7.  
 Note: TBLSET can be in ASK or AUTOMATIC mode. For the example shown, TBLSET is in AUTOMATIC mode with TblStart = 1 and  $\Delta\text{Tbl} = 1$ .

$n$	$u(n)$	
1	12	
2	19	
3	26	
4	33	
5	40	
6	47	
7	54	
$n=1$		

Figure 7



5. To generate a graph of the sequence, set the window by pressing **WINDOW**.  
A possible window is shown in Figure 8. You will need to scroll down to enter information about the scale along the y-axis. See Figure 9.

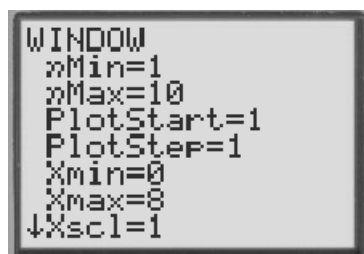


Figure 8

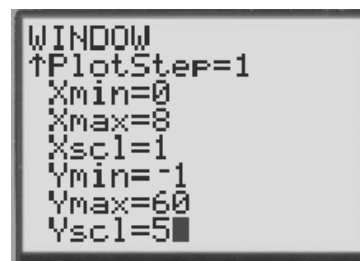


Figure 9

- $n_{\text{Min}}$  is the starting value of  $n$  in the sequence.
  - $n_{\text{Max}}$  is the ending value of  $n$  in the sequence.
  - PlotStart is the first value of  $n$  to be used when plotting the sequence.
  - PlotStep is the increment of  $n$  to be used.
6. Press **GRAPH** to see a scatterplot of the sequence. See Figure 10.  
Press **TRACE** to get information about the points, as shown in Figure 11.

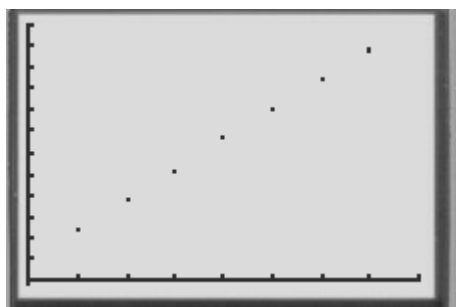


Figure 10

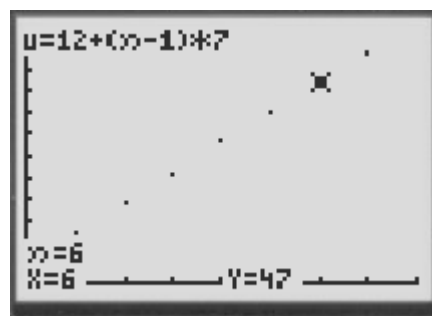


Figure 11

