

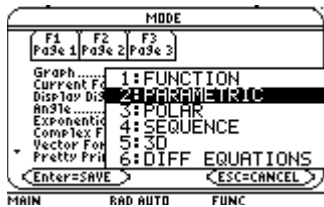
How to Graph a Sequence on a TI-89 or TI-92

These instructions are designed to give students the information needed to graph a sequence on their graphing calculators. In order to do this, we will go through the steps of graphing the sequence

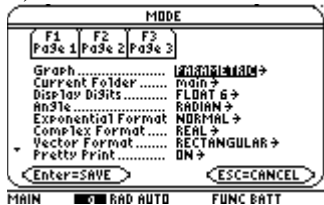
$$a_n = \frac{n!}{n^n}$$

Complete the following steps:

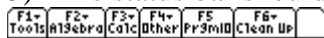
- 1) Press the “MODE” key
- 2) Change the “Graph” mode to “PARAMETRIC”



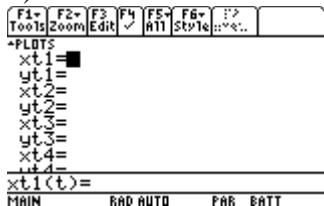
- 3) Press Enter



- 4) Press Enter again to save your changes.
- 5) The status bar should now read PAR instead of FUNC



- 6) Go to the “Y=” screen (press diamond F1)



7) Put $xt1 = t$, and $yt1 = t!/t^t$

```

F1- F2- F3- F4- F5- F6- F7-
Tools Zoom Edit ✓ All Style Help...
*PLOTS
✓xt1=t
✓yt1=t!
      t
      t
xt2=
yt2=
xt3=
yt3=
xt2(t)=
MAIN RAD AUTO PAR BATT

```

One can find the “!” factorial symbol by going to 2nd Math - #7 Probability - #1 !

```

F1- F2- F3- F4- F5- F6- F7-
Tools Zoom Edit ✓ All Style Help...
To: MATH
*P
✓1: Number
✓2: Angle
✓3: List
✓4: Matrix
>5: Complex
>6: Statistics
>7: Probability
>8: Test
xt2(t)=
MAIN RAD AUTO PAR BATT

```

```

F1- F2- F3- F4- F5- F6- F7-
Tools Zoom Edit ✓ All Style Help...
To: MATH
*P
1: !
2: nPr(
3: nCr(
4: rand(
5: randNorm(
6: RandSeed
7: randMat(
8: randPoly(
TYPE OR USE ←→+ [ENTER] OR [ESC]

```

8) Now change the plot style to “DOT” by pressing F6 then #2

```

F1- F2- F3- F4- F5- F6- F7-
Tools Zoom Edit ✓ All Style Help...
*PLOTS
Plot 1:
✓xt1=t
✓yt1=t!
      t
      t
xt2=
yt2=
xt3=
yt3=
xt1(t)=t
MAIN RAD AUTO PAR BATT

```

9) Now go to the “Window” screen

```

F1- F2-
Tools Zoom
tmin=0.
tmax=6.28318530718
tstep=.13089969389957
xmin=10.
xmax=10.
xscl=1.
ymin=10.
ymax=10.
yscl=1.
MAIN RAD AUTO PAR BATT

```

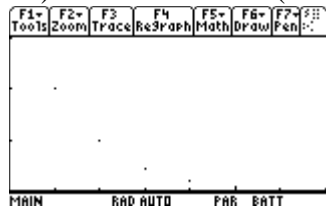
10) Change the settings to read as follows

```

F1- F2-
Tools Zoom
tmin=1.
tmax=7.
tstep=1.
xmin=0.
xmax=7.
xscl=1.
ymin=0.
ymax=1.5
yscl=1.5
MAIN RAD AUTO PAR BATT

```

11) Now "GRAPH" (Diamond F3)

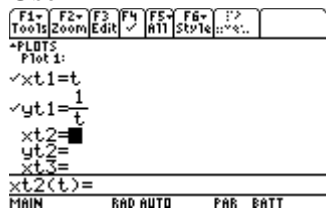


12) Use this sequence example to try others:

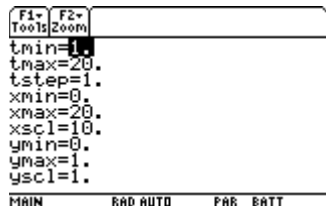
For example

$$a_n = \frac{1}{n}$$

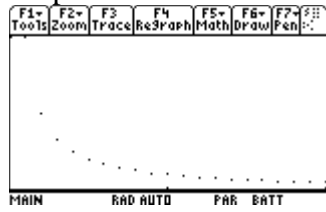
Use



And



To produce



Have Fun!