

Instructions for simulating a Sampling Distribution for TI-30X IIs Calculator  
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Instructions for these instructions:  
**A** is an abbreviation for “select A from the menu”  
**[...]** means press a button that looks like “...”

The calculator screen should look as follows after each line of inputs

- |     |  |   |
|-----|--|---|
| 1.  | Initialization before sampling   |   |
| a.  | Put zero into storage variable “A”<br>0[STO>] <b>A</b> [ENTER]   | 0 A<br>0.                               |
| b.  | Put your mean (25, in this case) into storage variable “B”<br>25[STO>] <b>B</b> [ENTER]  | 25 B<br>25.                             |
| c.  | Put your standard deviation (7, in this case) into storage variable “C”<br>7 [STO>] <b>C</b> [ENTER]   | 7 C<br>7.                               |
| d.  | Put “seed” value of 123 into RAND<br>123[STO>] <b>rand</b> [ENTER]   | 123 rand<br>123.                        |
| 2.  | Create the first sample value of the first sample  |   |
| a.  | [MEMVAR] <b>A</b> [ENTER]  | A                                       |
| b.  | +  | A+                                      |
| c.  | [MEMVAR] <b>B</b> [ENTER]  | A+B                                     |
| d.  | +  | A+B+                                    |
| e.  | [MEMVAR] <b>C</b> [ENTER]  | A+B+C                                   |
| f.  | × ([PRB] <b>RAND</b> [ENTER]   | A+B+C*(RAND                             |
| g.  | −0.5) × [2nd][ ] 12 ) [STO>] <b>A</b> [ENTER]  | A+B+C*(RAND−0.5)* (12) A<br>12.93121889 |
| 3.  | Create the next 9 sample values and accumulate them as storage variable A by pressing enter 9 times  |   |
| a.  | [ENTER]  | A+B+C*(RAND−0.5)* (12) A<br>42.93386618 |
| b.  | [ENTER]  | 58.62634306                             |
| c.  | [ENTER]  | 76.22879571                             |
| d.  | [ENTER]  | 111.9125906                             |
| e.  | [ENTER]  | 145.6253854                             |
| f.  | [ENTER]  | 168.5501255                             |
| g.  | [ENTER]  | 193.812884                              |
| h.  | [ENTER]  | 221.0133691                             |
| i.  | [ENTER]  | 237.0293972                             |
| 4.  | Record the value in storage variable A. For example, on a piece of paper. This value is 10 times the sample mean since you pressed [ENTER] 10 times.           |   |
| 5.  | Reinitialize storage variable A to the value 0.  |   |
| a.  | Put zero into storage variable “A”<br>0[STO>] <b>A</b> [ENTER]   | 0 A<br>0.                               |
| 6.  | By pressing the up arrow (twice?), retrieve the sampling formula into the top line of the calculator window.   | A+B+C*(RAND−0.5)* (12) A<br>0.          |
| 7.  | Create the next 10 sample values and accumulate them as storage variable A by pressing “enter” 10 times  | A+B+C*(RAND−0.5)* (12) A<br>15.37000079 |
| 8.  | Record the value in storage variable A. For example, on a piece of paper. This value is 10 times the sample mean since you pressed [ENTER] 10 times.           | A+B+C*(RAND−0.5)* (12) A<br>242.5031674 |
| 9.  | Repeat steps 5. through 8. until you get tired.  |   |
| 10. | Make a histogram or stem and leaf plot of your sample means. Remember that each of the values your recorded are 10 times the mean, so adjust them accordingly. |   |