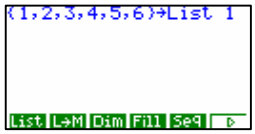
Rolling a dice simulation using a tally table - Part 2

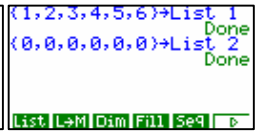
Select RUN mode from the main menu by using the arrow keys to highlight the RUN icon or pressing 1, similarly using the arrow keys to highlight the STAT icon or pressing 2.

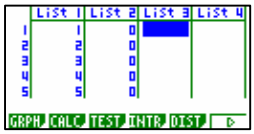
In '**Rolling a dice simulation using a tally table - Part 1'** moving from the **RUN** icon to the **STAT** icon and back the command instructions were lost and you had to type it all in again!

Once again we will start with: Suppose you want to generate the rolls of a **fair 6 sided die** which has the numbers 1, 2, 3, 4, 5 and 6 on each face. In the **RUN** icon and type: {1,2,3,4,5,6}? List 1 **EXE** and then {0,0,0,0,0,0}? List 2 **EXE**.

These commands set up a **'Tally Table' (in List 1 - score and list 2 - frequency)**.







Checking the **STAT** icon

Using the random number generator **Int(Ran#x6)+1** to generate the rolls of the die (or dice), the command illustrated will sent the result to the tally table set up in List 1 and List 2. We can instruct the calculator to build up this frequency column each time the **EXE** key is pressed.

Section 1: Type in as shown in the screen dump on the right.

Required commands:

Int **OPTN** **F6** **F4** **F2** Ran# **OPTN** **F6** **F3** **F4**

List **OPTN** **F1** **F1** : **SHIFT** **VARS** **F6** **F5**

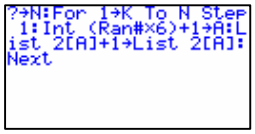
Before you press **EXE** you are going to store this set of instructions.

Follow the menu trail: **OPTN** **F6** **F6** **F3** **F1** **F1**. You have stored these instructions in f1 and can now recall the instructions at any time by following the menu trail: **OPTN** **F6** **F6** **F3** **F2** **F1**.

Now generate however many rolls of the dice by pressing **EXE**. See **'Rolling a dice simulation using a tally table - Part 1'** for setting up and displaying a histogram and / or summary statistics based on the data you have generated.

Section 2: No need to press **EXE** all the time!

With a few minor adjustments to the above commands, a small program can do the whole process. [See screen snap opposite.]



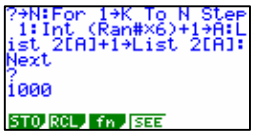
Make sure that List 1 and list 2 have been 'reset' to:

{1,2,3,4,5,6}? List 1 **EXE** and

{0,0,0,0,0,0}? List 2 **EXE**

Extra commands required:

? **SHIFT** **VARS** **F4**



For To Step Next: **SHIFT** **VARS** **F1** **F6** then either **F1** **F2** **F3** or **F4**

When you press **EXE** a '**?**' is displayed, enter how many rolls of the dice you require (e.g.1000) and then just wait! Enter into the **STAT** icon and statistically view the simulation graphically and / or numerically. In this instance . . .