

Statistics Activity 1: Rolling Dice Simulation

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CALCULATORS: Casio: *fx-9750G Plus & CFX-9850G Series*

Keystrokes for the Calculator

From the Main Menu, press **2** for STAT.

If there are data in List 1, follow these directions:

- Press **F6** (make sure that the highlighted cell is List 1 by pressing the **right/left arrow**)
- Press **F4** (DEL-A) then press **F1** (YES).

Enter Data:

- Type the random number data in List 1 and List 2.
- With appropriate cell highlighted, type numerical value then **EXE** to store.

Find One-Variable Statistics:

- Press **F2** (CALC) then **F6** (SET).
- With 1-Var Xlist highlighted, press **F1**(List 1) .
- Press **EXIT**.
- Press **F1** (1-VAR).
- Use the **down arrow key** to scroll for more values.

Create a Histogram: In the STAT mode

- Press **EXIT**.
- Press **F1** (GRPH) **F4** (SEL). Make sure Graph 1 is turned on. Then press **EXIT**.
- Press **F6** (SET). Press **down arrow key** to Graph Type. Press **F6**. Then press **F1** for Histogram.
- Press **down arrow key** to Xlist, press **F1**. Press **down arrow key** and **F1** (1).
- Press **EXIT F1** for Graph 1. Set the start and pitch at 1. Then press **EXE** and the graph should appear.
- To trace, press **SHIFT F1**.

If your graph does not appear, follow these directions:

- Press **SHIFT** then **MENU**.
- Press **F1** to change Stat Window to Auto.
- Press **EXIT**.

Student Worksheet Activity 1

1. What is the experimental probability of a 7? _____
2. What is the experimental probability of a 7 or 11?
(Pass line bet wins in craps) _____
3. What is the experimental probability of a 2, 3, or a 12?
(Pass line bet loses in craps) _____

Next using theoretical probability, answer the following questions.

4. What is the probability of a 7? _____
5. What is the probability of a 7 or 11?
(Pass line bet wins in craps) _____
6. What is the probability of a 2, 3, or a 12?
(Pass line bet loses in craps) _____

Now combine data from three other students to complete the following table.

L1	1	2	3	4	5	6	7	8	9	10	11	12
L2												

Using the data above ($n = 100$), answer questions 7-9.

7. What is the experimental probability of a 7? _____
8. What is the experimental probability of a 7 or 11?
(Pass line bet wins in craps) _____
9. What is the experimental probability of a 2, 3, or a 12?
(Pass line bet loses in craps) _____

How do the answers for 1-3 compare to the answers for 7-9? How do they each compare to the theoretical probabilities in answers 4-6.
