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| **Overview**  In this activity, you will create a table and graph for a binomial distribution for a given sample size and given probability of success. |
| **Materials**  • *TI-84 Plus CE™ calculator or TI-84 SmartView™ Computer Software* |

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| **Part 1—Prep**  1. Press **Stat > Edit**. You will add a new column by pressing **2nd > Del (Ins)**. Press **2nd > Alpha** and name the column **S** for successes. Repeat this process and name the second column **PDF**.  Note:To obtain capital letters on the handheld, press the **Alpha** key, then the letter.  **Part 2—Creating a Table for Binomial Distribution**  2. Move the cursor to the top cell for the Column labeled **S**, and press **2nd > Stat > OPS > 5: seq(**. Fill in the template with  **(x, x, 0, 50, 1)**.  Press · to create a list of integers from 0 to 50 progressing in steps of 1. | C:\Users\wilkied\AppData\Local\Temp\Texas Instruments\TI-SmartView CE for the TI-84 Plus Family\Capture42-1606792371766.png  C:\Users\wilkied\AppData\Local\Temp\Texas Instruments\TI-SmartView CE for the TI-84 Plus Family\Capture43-1606793285972.png |
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| Assume that you have 50 binomial trials, where the probability of success is 0.30.  3. Move the cursor to the top cell for the Column labeled **PDF,** and press **2nd > Vars > A: binompdf(** **.** Fill the template with  **(50, 0.30, S).**  Note: When filling in the template and using the data from the first column, make sure to press **2nd > Stat** to see the list names (**S**). | C:\Users\wilkied\AppData\Local\Temp\Texas Instruments\TI-SmartView CE for the TI-84 Plus Family\Capture44-1606830875313.png |
| Press· to create a binomial distribution for integers from 0 to 50 where the probability of a success is 0.30.  **Part 3—Creating a Graph of a Binomial Distribution**  4. Press **2nd > Y = >** · to open the stat plot. Turn the plot on, select the histogram, select **S** for the **XList**, and **PDF** for the **Freq**. You choose the color. | C:\Users\wilkied\AppData\Local\Temp\Texas Instruments\TI-SmartView CE for the TI-84 Plus Family\Capture45-1606831262936.png |
| 5. Press **Window** and change your settings to what you see to the  right. Press **Graph**. | C:\Users\wilkied\AppData\Local\Temp\Texas Instruments\TI-SmartView CE for the TI-84 Plus Family\Capture46-1606831441797.png |
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| The screen to the right shows the resulting graph of a binomial distribution. | C:\Users\wilkied\AppData\Local\Temp\Texas Instruments\TI-SmartView CE for the TI-84 Plus Family\Capture47-1606831549989.png |
| 6. **Students**: Go to the Binomial Pdf Eye Color worksheet, and follow your teacher's directions to answer the questions. | |
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