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| **Part 1 – Magic Sum Part 1** |
| Have you ever seen anyone do mental math tricks quickly and wonder how they did it? In this activity, you will learn a trick that will involve adding a list of ten numbers in a split second. **1.** Fill in the following table with the numbers generated by your class.

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|  |  |  |  |  |  |  |  |  |  |

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| **2.** Enter the two lists in L1 and L2. Find the sum of the numbers in the table above. On the Home screen, press ` ò ► ► and select **5:sum(**. Press ` æ ) e to select **L2** and carry out the command.  |  |
| **3.** Was your teacher’s sum correct?  |
| **Part 2 – Magic Sum Part 2** |
| **4.** Complete the table based on the rules discussed, using the numbers 7 and 5.

|  |  |  |  |
| --- | --- | --- | --- |
| **L1** | **Each Element** | **Distributive Property** | **L2** |
| 1 | 7 |  |  |
| 2 | 5 |  |  |
| 3 |  |  |  |
| 4 |  |  |  |
| 5 |  |  |  |
| 6 |  |  |  |
| 7 |  |  |  |
| 8 |  |  |  |
| 9 |  |  |  |
| 10 |  |  |  |

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| **5.** In the table, how many 7s are there? **6.** How many 5s are there? **7.** Write the mathematical expression as: \_\_\_\_ × 7 + \_\_\_\_ × 5**8.** What factor do 55 and 88 have in common? **9.** Rewrite the expression as: (11)(5)(7) + (11)(8)(5) = 11(5 × 7 + 8 × 5). Verify that the expression is the same the one in Question 7. (Use your calculator to find the value of all three mathematical expressions.)  Are the expressions the same? **10.** Is the number 5(7) + 8(5) in the numerically generated list in the table for Question 4? If so, what number in the list?  |
| **11.** Use **sum(L2)** to find the sum of the numbers generated in your table. Press ` ò ► ► and select **5:sum(**. Press ` æ ) e to select **L2** and execute the command.  Sum =  What is the *summagic* rule?  |  |
| **12.** Work with a partner to choose your own numbers and find the sum using the *summagic* rule. Check your sum using **sum(L2)**.  |