Name:

Instructions:

1. Let's see if the rule you developed in Worksheet 1 works for the data you gathered previously. First, you need to set up your TI-15 with your rule so you can check your results quickly.

To define an operation (formula) first press the Op1 (or Op2) key then type the steps of the operation and then press Op1 (or Op2) to set the operation

For example, to set the formula
$t = 0.5 \times n$

Press Op1 × 0.5 Op1

2. Set up your calculator with your rule.

3. Copy the results from the table in Worksheet 1 into the table below. Then use your rule you have set up under **Op1** to fill in the row labelled Predicted time using your rule. To perform this calculation, press the number of the people in the queue and then **Op1**.

Number of People	5	10	15	20	....	....	....	...	...
Time (sec)									
Predicted time using your rule									
Difference between actual time and your predicted time									

4. Now find the difference between your predicted time and the actual time. What do you notice?

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5. Adjust your rule according to the difference you found in 4 above. Write your new rule below:

_____

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6. Now place this next rule into **Op2** within your calculator and use this new rule to fill in the table below:

Number of People	5	10	15	20	....	....	....	...	...
Time (sec)									
Predicted time using your rule									
Difference between actual time and your predicted time									

7. Does your new rule provide a more accurate prediction of time for a tap to be passed along a line? Discuss your results:

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8. Use your rule to predict how long it would take for a tap on the shoulder to pass through 100 people. Write your result below:

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9. How does the prediction based on your new rule compare with the prediction you obtained from your graph in Worksheet 1? Discuss any reasons they might differ:

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