

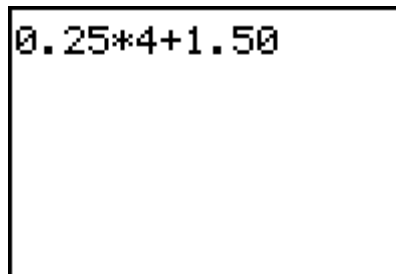


In this lesson you will look at a scenario of renting a video game system. You are going to rent a video system for \$0.25 per hour plus \$1.50 as a surcharge.

Problem 1 –Number Sentences

1. If you rent the system above for 4 hours, how much will you pay? Show the number sentence you used.

You can enter the number sentence on the TI-73 to perform the calculation. For 4 hours, you would press $0 \ . \ 25 \ * \ 4 \ + \ 1 \ . \ 50 \ \text{ENTER}$.



2. What if you rented the system for 6 hours? For 8 hours? Write the number sentence for each case.

3. Which part of your number sentence keeps changing? What does it represent?

4. How could you write a math sentence about this problem using the letter x to hold the place for the number of hours? _____
5. Is the number of hours the only thing that changes? If not, what else changes?

6. Now, write a math sentence using y to hold the place of the total cost.

Problem 2 – Creating a Graph

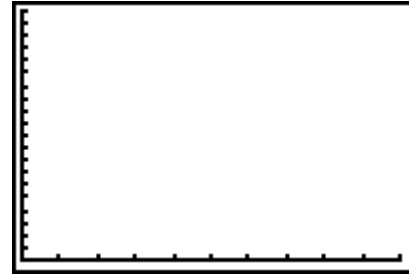
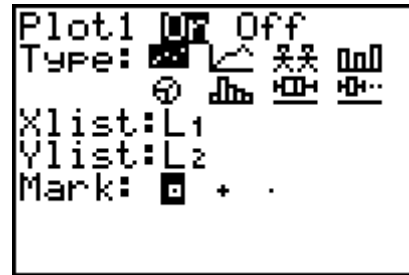
Now, let's enter several x - and y -values into lists to create a scatter plot.

7. Enter values in L1 (x) and L2 (y) for x -values of 1, 2, 3, 4, 5, and 10. List the ordered pairs.

L1	L2	L3	Z
1.00	1.75	-----	
2.00	2.00		

L2(3) =			

8. Set up a scatter plot as shown at the right. Then draw the scatter plot you create of all the ordered pairs.
9. Draw a line to connect all the ordered pairs. What does this line represent? _____



Problem 3 – Graphing the Equation

Finally, look at the equation that can model our rental scenario.

10. Enter the math sentence you wrote in Question 6 into Y1 (press $\boxed{Y=}$), and then graph (press $\boxed{\text{GRAPH}}$). How does the graph of the equation compare to the line drawn in Question 9?

11. Look at a table of the function values. Press $\boxed{2\text{nd}}$ $\boxed{\text{WINDOW}}$ and set up the table as shown at the right. Press $\boxed{2\text{nd}}$ $\boxed{\text{GRAPH}}$ to see the actual table of function values. How do these values compare to the list of ordered pairs from Question 7?



12. Use the Trace feature to trace both the scatter plot and the function. Use the words continuous and discrete to describe the differences between the two.
