

Left Handed or Right Handed?

Suppose that you did not know whether a person was right-handed or left-handed. What task could you devise to investigate this?

A way to test this might be to have a person to perform a simple task using one hand and then the other. You might assess it by having students snap their fingers or flip coins with each hand. We will do this by having each person print the first letter in their last name inside a box, and to repeat this as many times as possible in 30 seconds. Each letter must be entirely inside of the box. Then they will repeat the exercise with their left hand. Try the exercise yourself.

Test using the right hand.

Test using the left hand.

1. How might this activity help you decide whether a person is left-handed or right-handed?

2. Record the date from each person in the class in the table below.

	Name	# completed-rt. hand (x)	# completed- lt. hand (y)
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			

3. Now we will enter the data that you collected. Go to $\boxed{2nd}$ [STAT] to enter the data. You may have to clear the lists before you begin.

For the ordered pairs we will use L_1 for the right-handed data (x) and L_2 for the left-handed data (y). Be sure that the data from the same person is in the same position on each list.

4. To display the data we will need to use \boxed{window} to establish minimum and maximum values for the x- and y- coordinates. Using 0 as a minimum value and 50 a maximum value for x and y should work well.

5. We now have to set up the plot by going to $\boxed{2nd}$ [PLOT]. Choose $\boxed{Plot1}$ and press \boxed{ENTER} . Turn the Plot1 on and set up the rest of the screen as seen to the below.



6. If you press \boxed{GRAPH} , you will see the points that you entered. What does each point on the plot represent?

7. How can you tell how many of your classmates are probably right-handed? left-handed?

8. Press $\boxed{Y=}$ and enter $Y1 = x$. Now press \boxed{GRAPH} again. Are there any points near this line? What might be true about students whose ordered pairs lies near the line?

Questions for future teachers:

9. What state and national standards does this activity address?

10. How does the use of the calculator enhance the activity?

11. How could you design an activity that would help decide whether a student is left-footed or right-footed?