

“Step Sheet: Graphing Pairs of Linear Equations”

Using Microsoft Excel Spreadsheets with Data

This step sheet will help you build a data table to graph pairs of linear equations. The lines will be graphed by using x coordinates of -10 and 10 .

Using Microsoft Excel

To set up a document for your data, follow these steps:

➤ Opening Microsoft Excel

Step 1

Find the Microsoft Excel icon, which could be in your application folder or in a Microsoft Office folder.

Step 2

Double-click the Microsoft Excel icon to open the program.

Step 3

When the Project Gallery opens, click OK to select a new blank workbook.

When the new workbook opens, you will have a blank spreadsheet ready to accept your text and data.

➤ Setting Up the Data Table

Step 1

Find cell number B1 and click the cell with the cursor.

Step 2

Enter “Pairs of Lines”, then press the Return key.

Step 3

Click cell B1 again, then click the **B** icon on the toolbar to make the text bold.

Step 4

Find cell number A3 and click the cell with the cursor.

Step 5

Enter “Equation 1”, then press Return.

Step 6

In cell A4, enter "x-coefficient", then press Return.

Step 7

In cell A5, enter "y-coefficient", then press Return.

Step 8

In cell A6, enter "constant", then press Return.

Step 9

In cell A7, enter "Slope 1", then press Return.

Step 10

In cell A9 enter "Equation 2", then press Return.

Step 11

In cell A10, enter "x-coefficient", then press Return.

Step 12

In cell A11, enter "y-coefficient", then press Return.

Step 13

In cell A12, enter "constant", then press Return.

Step 14

In cell A13, enter "Slope 2", then press Return.

Step 15

Click cell A3 and drag down to cell A13, then click the **B** icon on the toolbar to make the text bold.

Step 16

In cell B3, enter " $2x+3y=8$ ", then press Return. This is the first linear equation.

Step 17

In cell B4, enter "2," then press Return. This is the coefficient of the x term.

Step 18

In cell B5, enter "3," then press Return. This is the coefficient of the y term.

Step 19

In cell B6, enter "8," then press Return. This is the constant term.

Step 20

In cell B7, enter " $=-B4/B5$ ", then press Return. This is the formula you found in problem #6 of Worksheet 1, slope = $-a/b$.

Step 21

In cell B9 enter " $3x-2y=5$ ", then press Return. This is the second linear equation.

Step22

In cell B10, enter "3," then press Return. This is the coefficient of the x term.

Step 23

In cell B11, enter "-2," then press Return. This is the coefficient of the y term.

Step 24

In cell B12, enter "5," then press Return. This is the constant term.

Step 25

In cell B13, enter " $=-B10/B11$ ", then press Return. This is the formula you found in problem #6 of Worksheet 1, slope = $-a/b$.

➤ **Creating the T-Chart**

Step 1

Click cell C3, enter "T-Chart", then press Return.

Step 2

In cell C4, enter "x", then press Tab.

Step 3

In cell D4, enter "y", then press Return.

Step 4

In cell C5, type "-10," then press Return.

Step 5

In cell C6, enter "10," then press Return.

Step 6

In cell C7, enter "-10," then press Return.

Step 7

In cell C8, enter 10, then press Return.

Step 8

In cell D5, type " $= (B6 - B4 * C5) / B5$ ", then press Return. This finds the y coordinate at $x = -10$ for the first equation.

Step 9

In cell D6, enter " $= (B6 - B4 * C6) / B5$ ", then press Return. This finds the y coordinate at $x = 10$ for the first equation.

Step 10

In cell D7, enter " $= (B12 - B10 * C7) / B11$ ", then press Return. This finds the y coordinate at $x = -10$ for the second equation.

Step 11

In cell D8, enter " $= (B12 - B10 * C8) / B11$ ", then press Return. This finds the y coordinate at $x = 10$ for the second equation.

Step 12

Click cell C3 and drag down to cell C4, then click the **B** icon on the toolbar to make the text bold.

Step 13

Click cell D4, then click the **B** icon on the toolbar to make the text bold.

Step 14

Place the cursor at the top of the spreadsheet and select column headings A through D. This should select columns A through D, which are the columns in which you have information.

Step 15

From the Format menu, choose Column, then AutoFit Selection. Your columns should resize to fit the information.

➤ **Creating a Graph**

Create a graph of your data table (See "Step Sheet: Graphing Pairs of Lines in Excel.")

➤ **Saving the Document**

Step 1

From the File menu, choose Save.

Step 2

In the dialog box that appears, type the name of your document. Make sure you are saving your work to the right location. Click Save.

➤ **Printing the Document**

Step 1

Click cell D11 or any empty cell.

Step 2

From the File menu, choose Print Preview.

Check to see that you are printing the cells you want and click the Print... button.

Step 3

In the dialog box that appears, make sure you are printing to a valid printer. Click Print.