

## EXAMPLE

Solve the system of equations using the graphical method by using MS Excel.

Remember, all computer programs graph using sets of coordinate pairs!

Steps:

put all equations in function form [  $y = mx + b$  ]

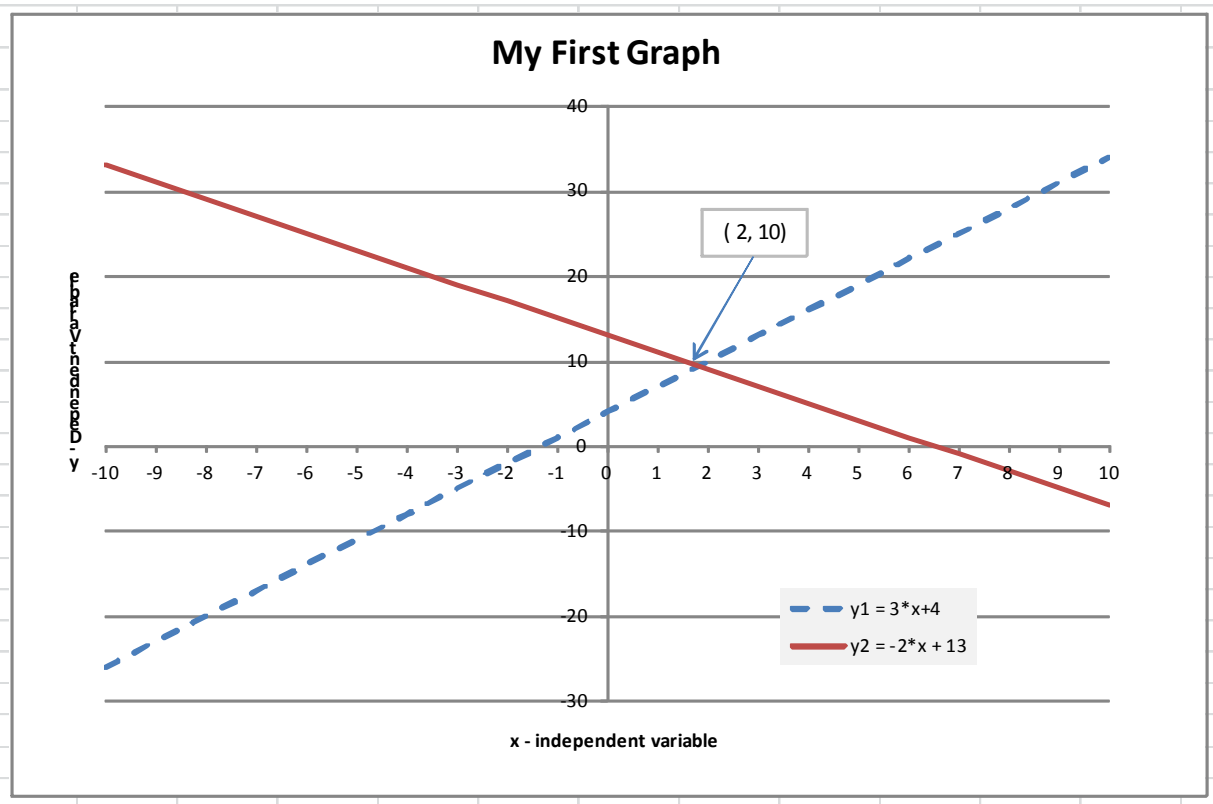
Create the DOMAIN - usually -10,-9, -8, ..., 10 in an Excel column

Write the function in an adjacent column

Use MS Excel line graph tool(s)

Graphically identify the line intersection.

| Domain | Range         |                   |
|--------|---------------|-------------------|
|        | $y_1 = 3*x+4$ | $y_2 = -2*x + 13$ |
| x      |               |                   |
| -10    | -26           | 33                |
| -9     | -23           | 31                |
| -8     | -20           | 29                |
| -7     | -17           | 27                |
| -6     | -14           | 25                |
| -5     | -11           | 23                |
| -4     | -8            | 21                |
| -3     | -5            | 19                |
| -2     | -2            | 17                |
| -1     | 1             | 15                |
| 0      | 4             | 13                |
| 1      | 7             | 11                |
| 2      | 10            | 9                 |
| 3      | 13            | 7                 |
| 4      | 16            | 5                 |
| 5      | 19            | 3                 |
| 6      | 22            | 1                 |
| 7      | 25            | -1                |
| 8      | 28            | -3                |
| 9      | 31            | -5                |
| 10     | 34            | -7                |



Solve the three homework problems below using MS Excel and the graphical technique. Include a hand solution as well.

**Problem 1:**             $x - y = 20$              $y = 2x - 4$

**Problem 2:**             $3x - 2 - y = 0$              $2x + y = 15$

**Problem 3**             $2x - 3y = 0$              $4x + y = 8$

**BONUS - Problem 4 (10 Points):** You presently have \$300 and make \$8.50/hour while you friend Billy Bob presently has \$735 and makes \$7.00/hour. Assuming neither of you spend any money, how many hours will you have to work until you both have the same amount of money?

Define your variables:

let x be the number of hours you work

let y be the amount of money you make

follow graphing steps!

identify the answer.

Send the Excel file to [mheinen\\_1@msn.com](mailto:mheinen_1@msn.com) as an e-mail attachment no later than Feb 15, 2013.

Name the Excel file as follows: LastName-Comp\_Lab-1.xlsx (Excel will automatically add the ".xlsx" suffix)