

Intersect

MATH 141

Fall '02

Intersect

Suppose we want to find the intersection point when $y = 4x - 10$ and $y = -2x + 20$. Press **Y=** and enter the two equations you wish to intersect $Y1 = 4x - 10$ and $Y2 = -2x + 20$.

Press **WINDOW** if you want to adjust the window of the graph. $Xmin$ is the x-value where you wish to start graphing. $Xmax$ is the x-value where you wish to stop graphing. $Ymin$ is the y-value where you wish to start graphing. $Ymax$ is the y-value where you wish to stop graphing. $Xscl$ and $Yscl$ are how often you want tick marks on the x and y axis, respectively.

$$Xmin = -10$$

$$Xmax = 10$$

$$Xscl = 1$$

$$Ymin = -10$$

$$Ymax = 20$$

$$Yscl = 5$$

$$Xres = 1$$

Press **GRAPH** to see the graph of the equations.

In order to find the intersection point, press the **2nd** key followed by the **TRACE** key. Select **5** intersect. The calculator will ask you to estimate the point using the first equation (you should see the $Y1$ equation in the top left corner) move the cursor along the curve using the left or right arrow buttons (up or down change to another equation) and when you get the cursor close press **enter**. The calculator will then ask you to repeat the process using the second equation (you should see the $Y2$ equation in the top left corner) and press **enter**. The calculator will then ask you to guess, press **enter**. At the bottom of your screen, you should see the word Intersection and the x and y coordinates of the intersection point.

The intersection point is $(5, 10)$.