**Solve Systems of Equations on a TI83 Calculator**

**\*Remember, when using the graphing calculator to graph equations, you must solve for y first. For Example, the equation 3x - 4y = 12 must be solved for y and then put into the calculator as y = 3/4x – 3.**

**Step 1:** Press *y =* and clear any old equations. Enter:

y = x + 6

y = 2x + 4

**Step 2**: Press *GRAPH* (If the intersection is off the graph, press *ZOOM*; arrow down until you see *0: ZoomFit* and hit enter or you can adjust the window.)

**\*\*\*You may find the point of intersection by then doing Step 3, Step 4, OR Step 5 – Please review all 3 steps as each way may be used independently\*\*\***

**Step 3**: Press *TRACE* and press the right arrow key several times until it is about over the intersection of the 2 lines.

**Step 4**: Find the intersection of the 2 equations by pressing *2nd CALC* (over *TRACE*) *5: intersect.* Press *ENTER* 3 times to find the intersection (2, 8).

**\*Check the point of intersection by substituting the x- and y-values into both equations**

**Step 5:** **There is a way to check for the correct solution with a graphing calculator. After entering the 2 equations, press *2nd TBLSET*(over WINDOW). For *INDPNT*: highlight *ASK*. Then press *2nd***

***TABLE* (over GRAPH) and enter the value for x in your solution. If the two y-values are the same, it is the solution. This is helpful on a multiple choice test.**

**Practice Solving Systems of Equations Using a Graphing Calculator**

**Find the intersection of each system of equations by using a graphing calculator. Check your solutions. (Hint: Sometimes you have to solve for y first.)**

**1. *y*** = −**4*x*** −**1 2. *y*** =**3*x*** −**4**

***y*** = − ***x*** + **2 *y***=**5*x***−**12**

**3. 2*x***−**4*y***=**8 4. *x*** + ***y*** = −**6**

***x*** − ***y*** = **4 *x*** −**5*y*** =**0**