**For all problems you need to use your calculator – I did part A for you-**

**1.** Of all the users of the web service Twitter, Lady Gaga (@ladygaga) has the most followers. At the start of year 2010, she had 3,200,000 followers. Her number of followers has been steadily increasing by 8% each month.

**a.** Let *f*(*x*) stand for how many followers @ladygaga has, *x* months after the start of year 2010.   
Write a function formula for *f*(*x*).

f(x) = 3,200,000(1.08)x

**b.** How many followers did @ladygaga have at the start of 2011?

**c.** *Solve graphically using the 2nd trace-intersect function on your calculator or by algebra using logarithms. Round your answer to two decimal places.* When did the number of followers of @ladygaga surpass 5,000,000 ?

**d.** *Solve graphically using the 2nd trace-intersect function on your calculator or by algebra using logarithms. Round your answer to two decimal places* Solve the equation *f*(*x*) = 10,000,000. Explain the meaning of the answer as it relates to @ladygaga on Twitter

