

### ACTIVITY 4 – GARBAGE

The table below gives the number of millions of tons of municipal solid wastes in the United States from 1960 to 2010. **Complete all the blanks in the table.**

Year	1960	1970	1980	1990		2000	2004	2005		2007	
Time Since 1960	0	10			34		44		46		50
Waste (millions of tons)	88	121	152	197	209	239	250	253	254	255	250

1) Draw a scatterplot using Excel of time since 1960 on the horizontal axis and Waste on the vertical. Use an appropriate scale for each axis, label your axis and title your graph.

2) Use Excel to find the trend line for this scatter diagram.

3) Give the points of two coordinates that lie on (Or are really really close) to the trendline

( \_\_\_\_\_, \_\_\_\_\_ ) ( \_\_\_\_\_, \_\_\_\_\_ )

4) What is the rate of change between these two points? Be sure to include the units. What meaning does this rate have?

5) What is the horizontal intercept? What meaning does it have in this context?

6) a) Use your equation to calculate the amount of waste in 2010.

b) Is your estimate close to the amount in the table? If your answer to b) was "no", what is happening in the real world that is affecting the predictions?

c) Use your equation to extrapolate the amount of waste in 2020. Do you think this prediction will be accurate? Why?