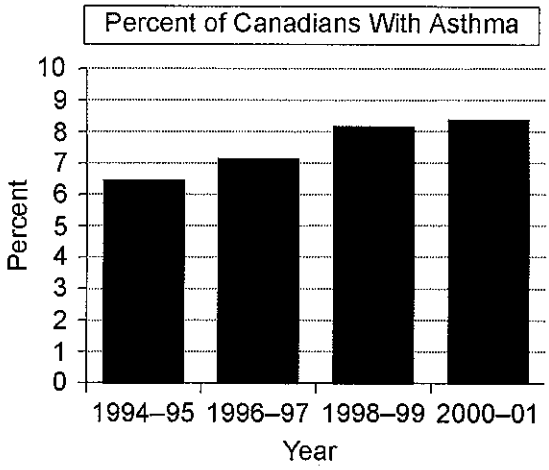
# 2.4 Trends, Interpolation and Extrapolation Worksheet

MPM1D

**1.** The graph shows the percent of Canadians with asthma.




**Source:** Statistics Canada, CANSIM, tables 104-0001 and 105-0001 and Catalogue no. 82-221-X.

**a)** Did the percent of Canadians with asthma increase or decrease between 1994 and 2001? How do you know?

**b)** Describe the trend in the percent of Canadians with asthma.

**2.** A teacher at an elementary school kept track of the numbers of students who regularly walk to school. The data are displayed in the table.

| Year | Number of Students |
|---|---|
| 1980 | 224 |
| 1985 | 203 |
| 1990 | 176 |
| 1995 | ? |
| 2000 | 102 |
| 2005 | 85 |

**a)** Make a scatter plot of the data.

**b)** Describe the trend in the number of students who regularly walk to school.

**c)** Using a line of best fit, predict the number of students who walked to school regularly in 1995. Is this interpolation or extrapolation?

**3.** The table shows the population of Alberta from 2001 to 2005.

| Year | Population (1000s) |
|---|---|
| 2001 | 3056.7 |
| 2002 | 3116.3 |
| 2003 | 3159.6 |
| 2004 | 3204.8 |
| 2005 | 3256.8 |

**Source:** Statistics Canada, CANSIM, table (for fee) 051-0001.

**a)** Make a scatter plot of the data.

**b)** Describe the trend in the population of Alberta.

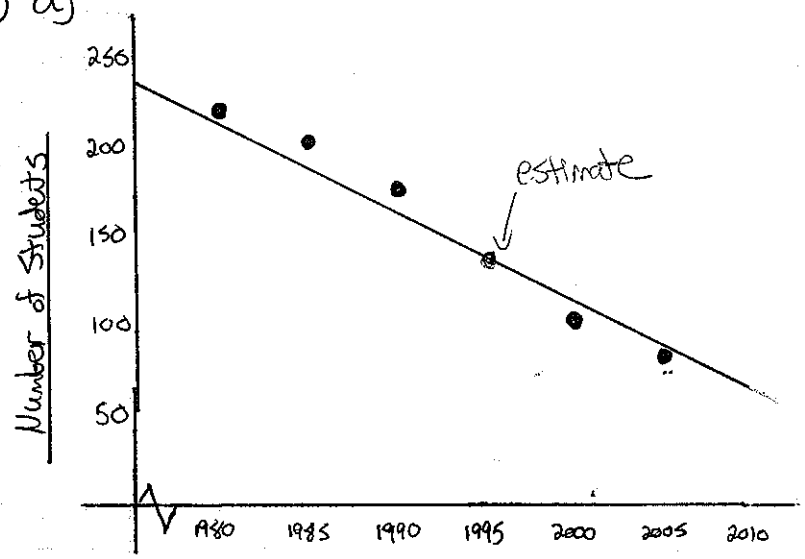
**c)** Using a line of best fit, predict the population of Alberta in 2010. Is this interpolation or extrapolation?

# 2.4 - Trends, Interpolation, and Extrapolation

* ANSWERS *

(1) a) increase
b) the number of Canadians with asthma has increased each period from 1994 to 2001

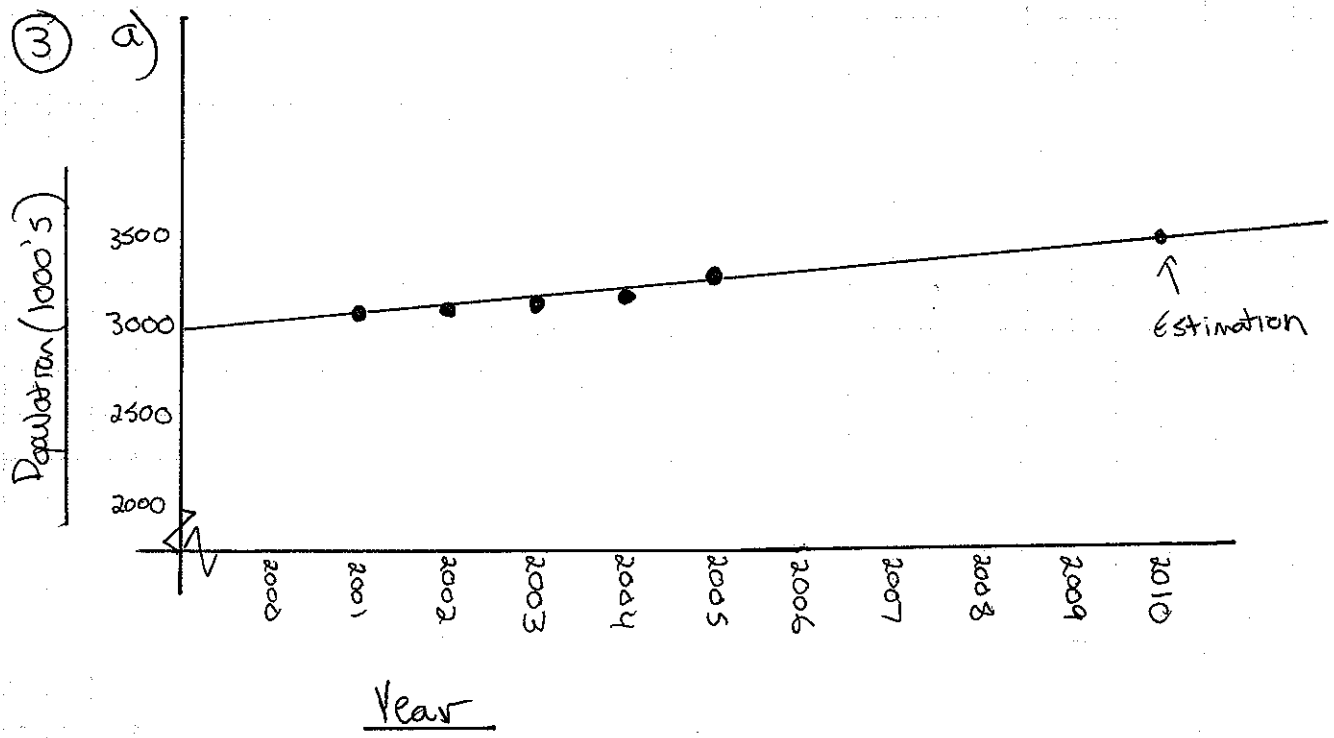
(2) a)




b) The # of students who walk to this elementary school has decreased steadily from 1980 to 2005.
There is a strong negative correlation.

c) Approximately 135.
Interpolation

(3) a)




b) The population of Alberta has shown a steady increase from 2001 - 2005.
There is a strong positive correlation.

c) 3 500 000, Extrapolation.