## Section 2.1: Broken Line Graphs

## Graphing Two Sets of Data at Once

## Graphing to show comparison

- Two broken line graphs drawn together can show a comparison between two variables that change over the same period of time.

This graph shows the comparison of house prices in Regina and Vancouver from 2006 to 2010.


In addition to the $\qquad$ and $\qquad$ on the axes, this type of graph also requires a $\qquad$ to indicate which line represents which data.

Variable \#1 = $\qquad$
Variable \#2 = $\qquad$

## Section 2.1: Broken Line Graphs

## Example:



What is this graph comparing?

For which years did School 1 have a higher grade 1 enrolment than School 2?

How many years were the grade 1 enrolments the same at both schools? What was the enrolment level?

What was the highest enrolment level for either school? When did it occur?

Discuss the trends in enrolment at the two schools:

## Section 2.1: Broken Line Graphs

## Example:

Create a double broken line graph for the following hospital admissions data:

| Day | Number of patients |  |
| :---: | :---: | :---: |
|  | Adults | Children |
| Day 1 | 2 | 5 |
| Day 2 | 6 | 8 |
| Day 3 | 9 | 5 |
| Day 4 | 11 | 14 |
| Day 5 | 8 | 7 |
| Day 6 | 15 | 9 |



## Section 2.1: Broken Line Graphs

## Misleading Graphs

## How a graph is displayed:

- Using different scales or changing the starting point of a scale can influence the interpretation of the data in a graph.


## Example:

Both of these graphs contain the same data. The only difference is the scale on the
$\qquad$ axis.


The scale for this graph begins at 500 and increases by 25 with each line of the grid.

This makes a $\qquad$ fluctuation look $\qquad$ _.

This symbol indicates there is a large gap between 0 and the starting value of 500 that is not shown. It would have resulted in a large blank space in the graph if the scale actually began at 0 and went up in increments of 25 .

The scale for this graph begins at 0 and increases by 75 with each line of the grid.

This makes a $\qquad$ fluctuation look $\qquad$ _.

## Section 2.1: Broken Line Graphs

Because of the differences in the scales, the graph on the left seems to show a

> than the graph on the right.:



Check your understanding:
Build your Skills, pg. 71-75, \#10, 11, 12

