

Trends in Graphs

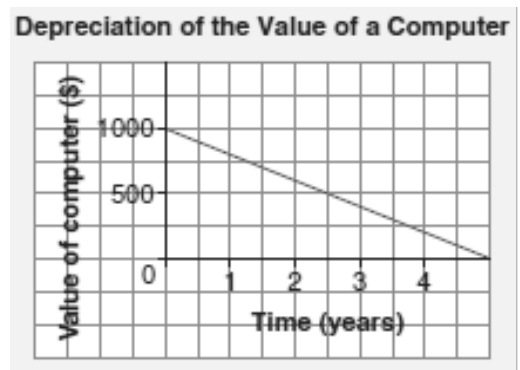
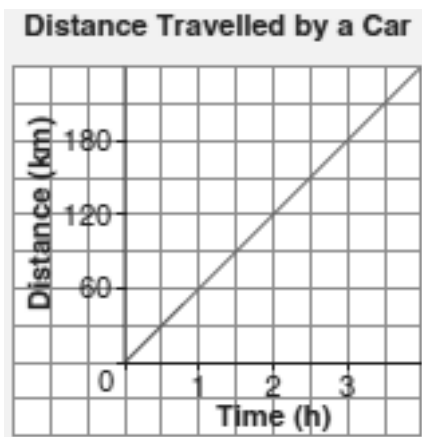
Recall:

The graph of a linear relation is a straight line.

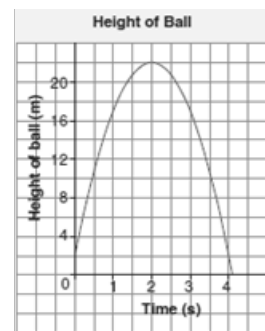
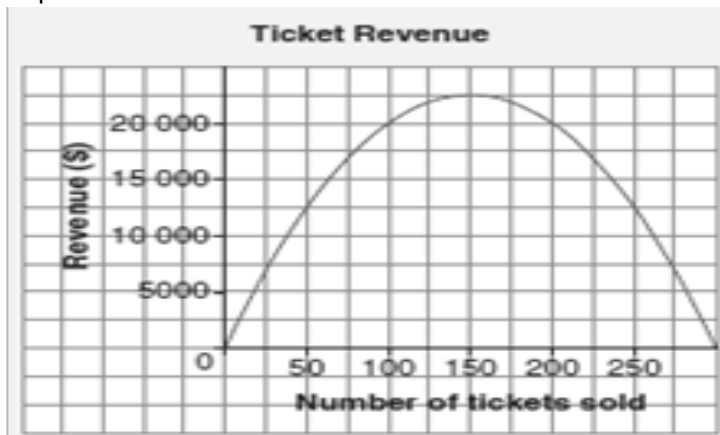
The graph of a quadratic relation is a parabola

The graph of an exponential relation is an exponential curve.

Example 1: Determine the slope of each line. What does each slope represent?

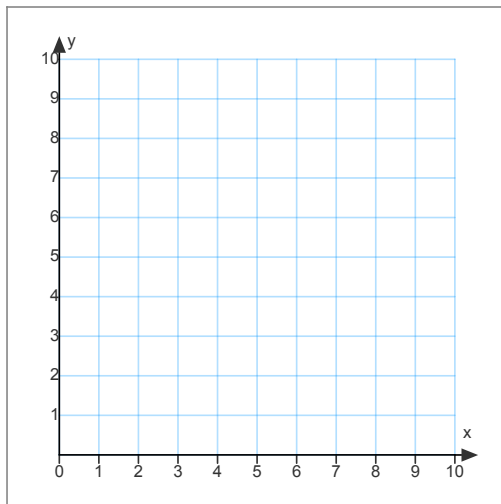


Example 2: Determine the coordinates of the vertex of each parabola. What do these coordinates represent in each situation?

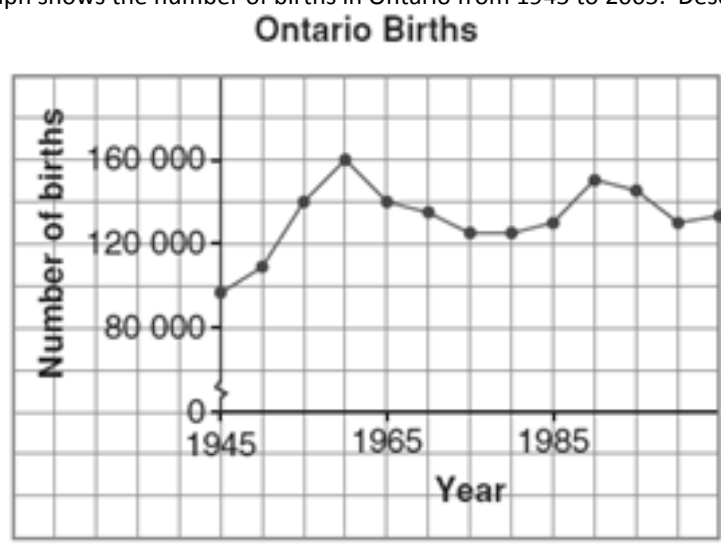


A graph is a visual representation of the relationship between two quantities. It shows how one quantity changes with respect to the other. **Trends occur in 3 broad groups:**

- a) **Increasing** – The graph will go up and to the right.  
– If it increases at a constant rate, the graph will be a straight line up to the right.
- b) **Decreasing** – The graph will go down to the right.  
– If it decreases at a constant rate, the graph will be a straight line down to the right.
- c) **Constant** – The graph goes straight across.  
– It is neither increasing nor decreasing.

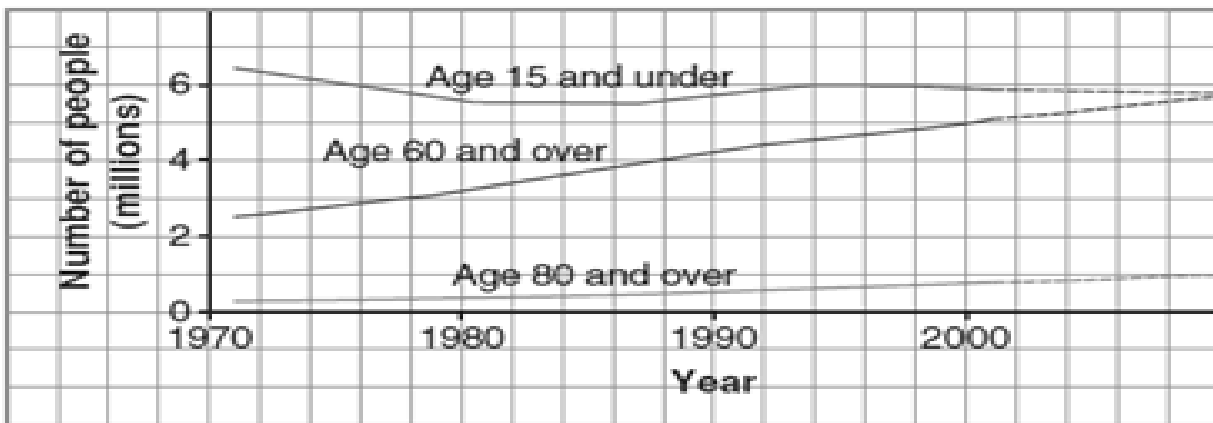


Example 3: This graph shows the number of births in Ontario from 1945 to 2005. Describe the trends in the graph.



- Example 4: a) Use the graph to predict the number of Canadians in each age group in 2010.  
b) What decisions might the Canadian government make in response to the trends in the graph?

**The Ageing of Canada's Population**



Homework: Pg. 273: #1-8,10-12