



Algebra1Coach.com

Using Graphs to Relate Two Quantities

Unit 4 Lesson 1

USING GRAPHS TO RELATE TWO QUANTITIES

Students will be able to:

Relate two quantities using graphs and
read the graphs

Key Vocabulary:

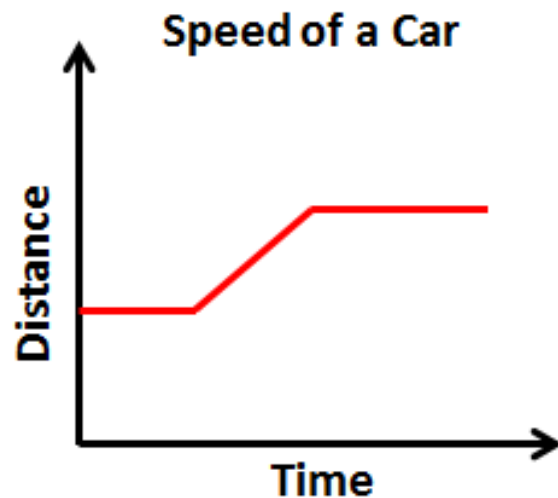
- Reading Graphs
- Title, Axes
- Data table

USING GRAPHS TO RELATE TWO QUANTITIES

Reading Graphs

In a graph, there are three things that can help us completely analyze the graph:

- **Title**
- **Axes**
- **Relation between axes indicating whether there is a linearly increasing relation, a linearly decreasing relation or a constant relation.**



USING GRAPHS TO RELATE TWO QUANTITIES

Linearly Increasing Relation:

A graph relating two quantities is linearly increasing if with the increase in one quantity, the other quantity also increases.

Linearly Decreasing Relation:

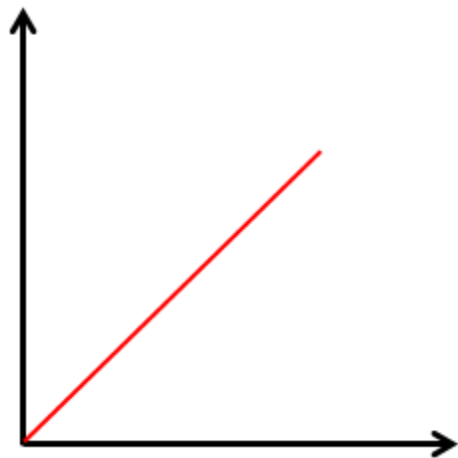
A graph relating two quantities is linearly decreasing if with the increase in one quantity, the other quantity decreases.

Constant Relation:

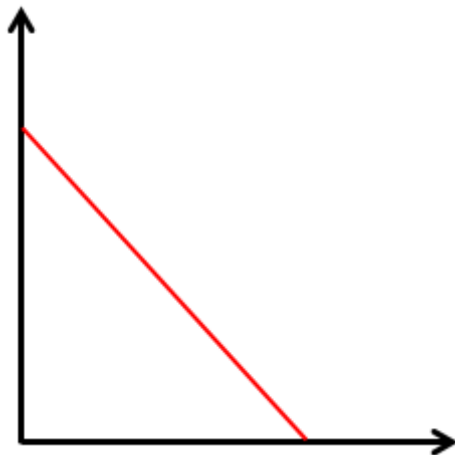
A graph relating two quantities has a constant relation if with the increase in one quantity, the other quantity does not change i.e. remains constant.

USING GRAPHS TO RELATE TWO QUANTITIES

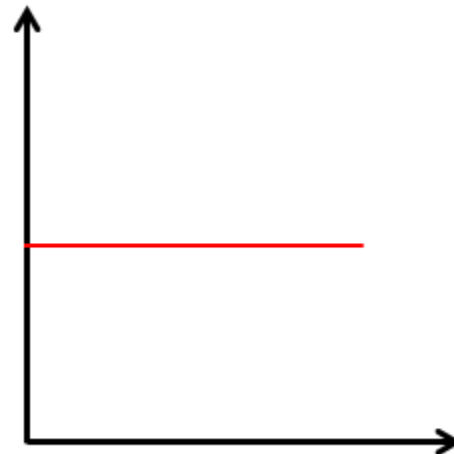
Graphs of Relations



Linearly Increasing



Linearly Decreasing



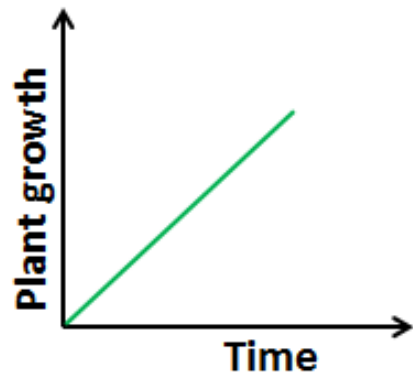
Constant

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Problem 1: What variables are in the graph given below? Also tell how the variables are related?

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The axes are **Plant growth** and **Time**, and the relation is **linearly increasing**. The graph tells that the plant growth increases with time.

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Data Table

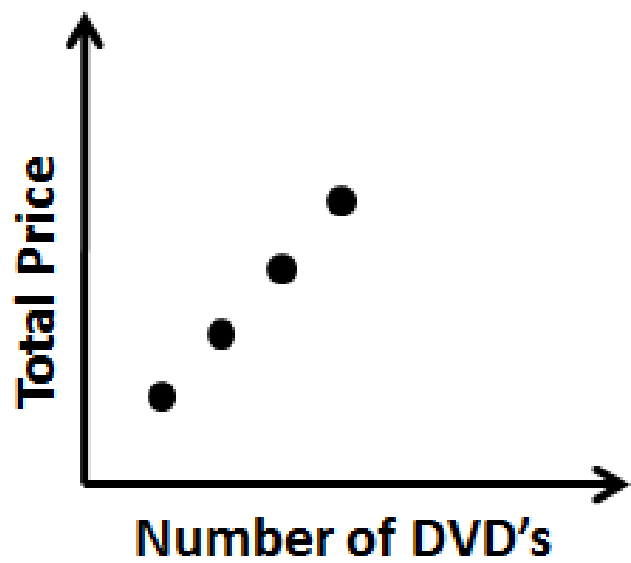
A graph can be used to show the relationship described in a table.

Number of DVD's bought	Total cost
1	10\$
2	20\$
3	30\$
4	40\$

We can make a graph to show the linearly increasing relation between the number of DVD's bought and their total cost.

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Graph of the Data Table



Number of DVD's bought	Total cost
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2	20\$
3	30\$
4	40\$

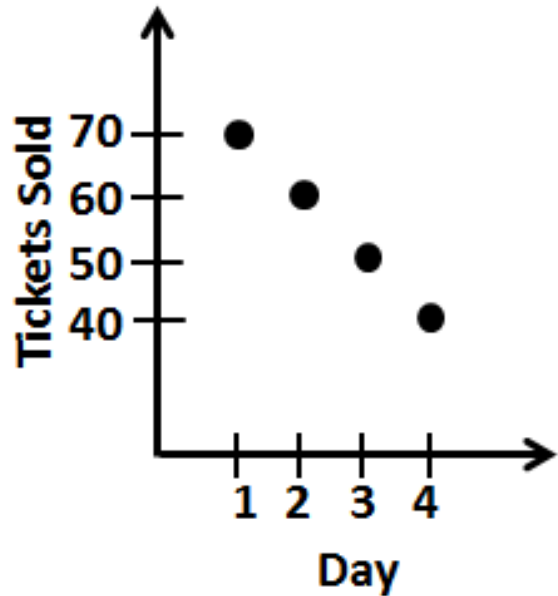
USING GRAPHS TO RELATE TWO QUANTITIES

Problem 2: Graph the data given in the table to relate the quantities.

Day	Tickets Sold
1	70
2	60
3	50
4	40

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Day	Tickets Sold
1	70
2	60
3	50
4	40