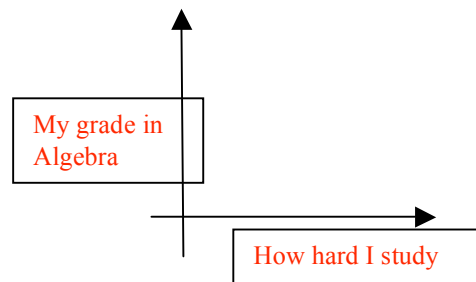


TASK 1.2.4: EXPLORING DEPENDENT AND INDEPENDENT**Solutions, Task 1.2.4, Part 1**

Mathematics is considered a universal language. People from all parts of the world read and interpret mathematical statements the same way. In order for this to happen, conventions must be established. Order of operations is one of these conventions. Worldwide, all people agree that problems will be simplified using the PEMDAS method that you learned. Another convention is the agreement that the x-axis will represent the independent variable and the y-axis will represent the dependent variable. Applying this agreement, determine the independent and dependent quantities of each statement and label the axes on the graph.

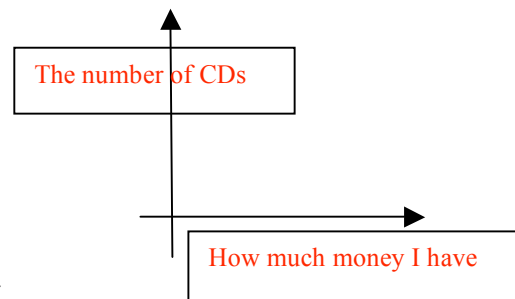
1. How hard I study will affect my algebra grade.

independent – how hard I study
dependent – my grade in Algebra



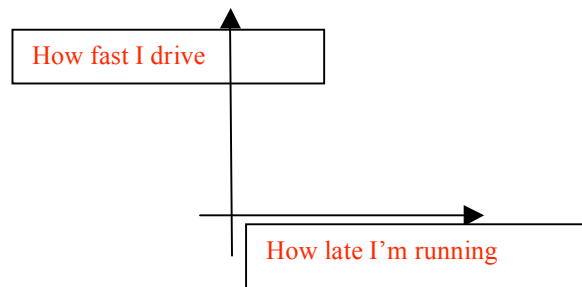
2. The number of CDs I buy depends on how much money I have.

independent – how much money I have
dependent – the number of CDs



3. How late I'm running determines how fast I drive.

independent – how late I'm running
dependent – how fast I drive



4. The cost of the bus ride is a function of the number of miles I ride.

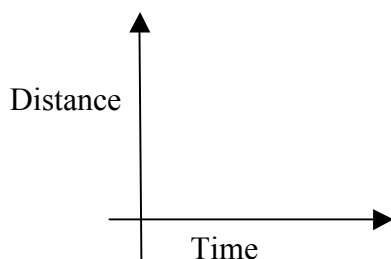
independent – number of miles I ride

dependent – cost of bus ride

Solutions, Task 1.2.4, Part 2

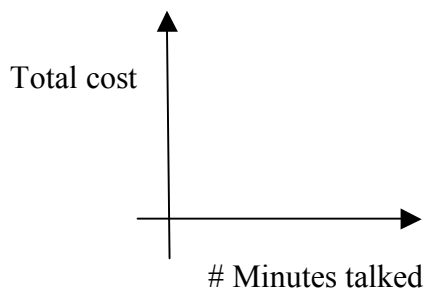
Use the labeled axes to write a dependent statement.

1.



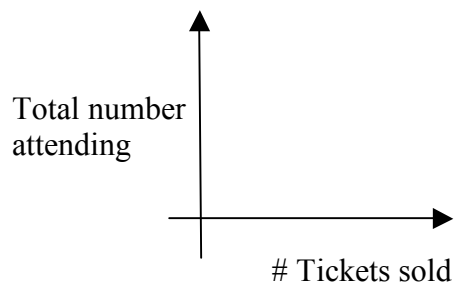
The distance depends on the time.
The time determines the distance.
The distance is a function of time.

2.

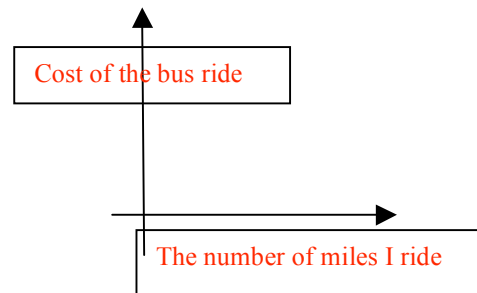


The total cost depends on the number of minutes talked. The number of minutes talked determines the total cost. The total cost is a function of the number of minutes talked.

3.



The total number attending depends on the number of tickets sold. The number of tickets sold determines the number attending. The number attending is a function of the number of tickets sold.



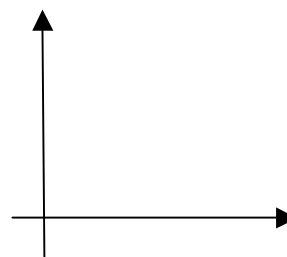
Teaching notes

In addition to gaining experience with the dependent/independent relationship and what these concepts look like graphically, it is important that students write descriptions and labels using correct language. Moving from representations of these relationships in graphs and symbols to the written word is as important as moving from the written word to graphs and symbols.

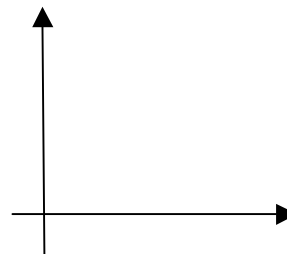
TASK 1.2.4: EXPLORING DEPENDENT AND INDEPENDENT**Task 1.2.4, Part 1**

Mathematics is considered a universal language. People from all parts of the world read and interpret mathematical statements the same way. In order for this to happen, conventions must be established. Order of operations is one of these conventions. Worldwide, all people agree that problems will be simplified using the PEMDAS method that you learned. Another convention is the agreement that the x-axis will represent the independent variable and the y-axis will represent the dependent variable. Applying this agreement, determine the independent and dependent quantities of each statement and label the axes on the graph.

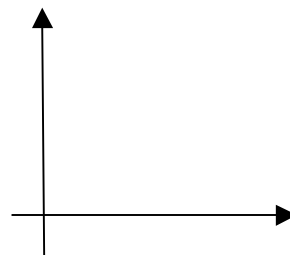
1. My grade in Algebra depends on how hard I study.



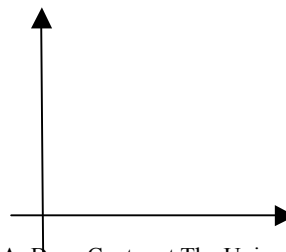
2. The number of CDs I buy depends on how much money I have.



3. How late I'm running determines how fast I drive.



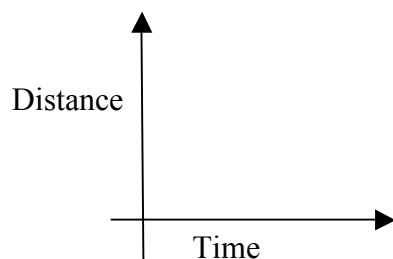
4. The cost of the bus ride is a function of the number of miles I ride.



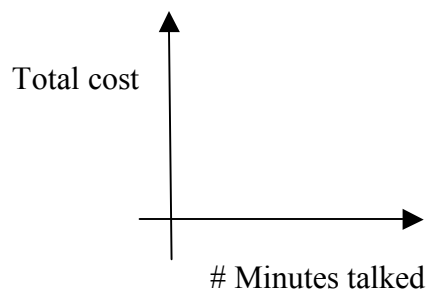
Task 1.2.4, Part 2

Use the labeled axes to write a dependent statement.

1.



2.



3.

