MFM 1PI Partial Variation

Last class we talked about being paid an hourly rate at a part time job. Some jobs pay an hourly rate plus a fixed. This is an example of Partial Variation.

Partial Variation:

When one quantity equals a fixed value plus a constant multiple of another quantity; its graph is a straight line that does NOT pass through the origin.

Examples:

waiter or waitress - hourly rate plus tips
sales person - commission(%of sale)plus fixed pay

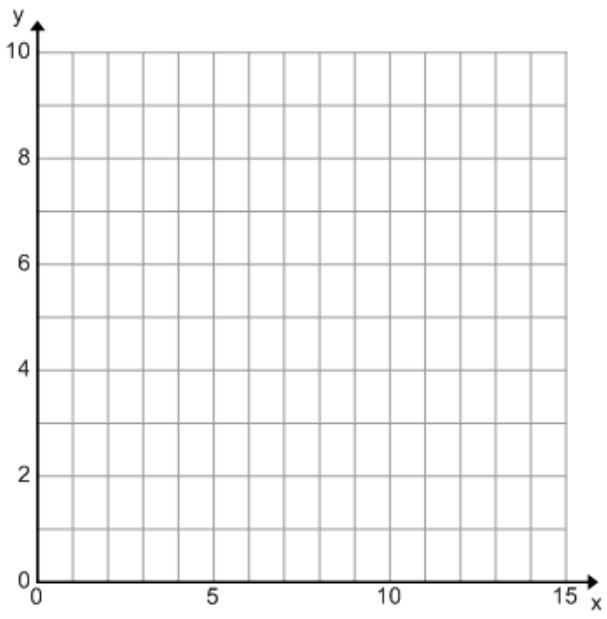
Ex. 1) Michael works as a salesman in an electronics store. For each month his fixed earnings are $2000, this part never changes. His variable earnings(the part that changes) are 15% of all his sales or _____. This amount changes from month to month.

An equation that represents his earning would be:_____

Using a Graph to show Partial Variation:

Ex.2) A taxi cab driver charges $2.50 plus $0.50\km for each trip.

a) set up a table of values and graph this relation.



b) Use the graph to determine the cost for a 6km trip.

c) use the graph to predict how far you would travel for $8.00.

d) Write an equation to model this partial variation.

Ex. 3) Jose is a professional baseball player. His contract states that he will be paid $3 million per season plus $100 000 for every win he earns.

a) The fixed part is _____

b) The variable part is:_____

c) Write an equation that relates Jose's earnings, E, to his number of wins, w.

d)Use the equation to predict Jose's earnings if he wins 10 games in one season

Practice: page 213 #1, 2, 5, 8

Quiz Next Day