

Grade 7 Maths Worksheet

Patterns and algebraic relationships

Questions:

1. A person is driving at a constant speed of 60 km per hour. The journey takes six hours to complete. He did not make any stops along the way.

- a) Complete the table:

Time on the road (in Hours)	1	2	3	4	5	6
The distance travelled (in km)						

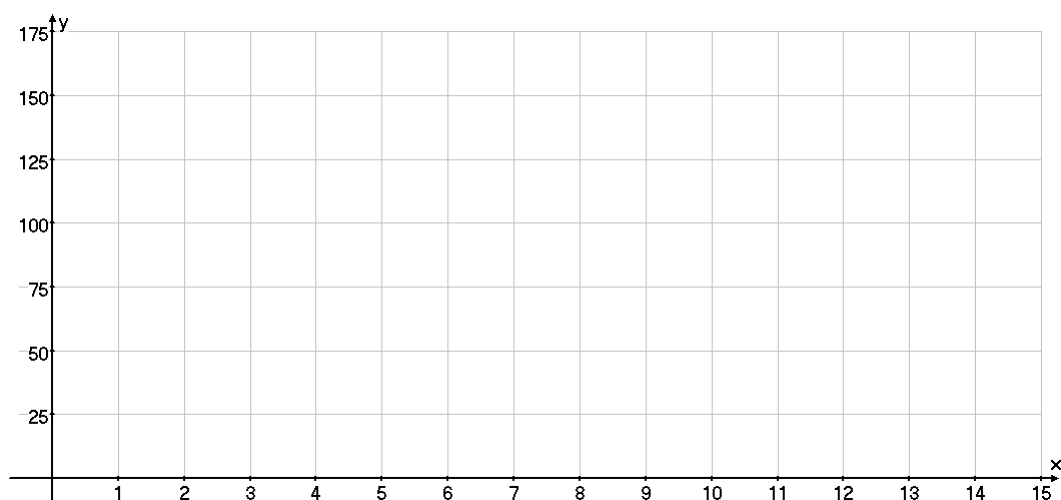
- b) Draw a graph that shows the distance travelled as a function of the time travelled.
 - c) If the person travelled for three more hours, how far would he have travelled?
 - d) Write down an equation that represents this function.
2. Rosie works for her uncle in his pizza business over weekends. She does not get tips as she is working in the kitchen. He pays her R12,50 per hour.

- a) Complete the table:

Number of hours worked	1	2	3	4	6	9	11	14
Money earned in Rands			37,50				137,50	

- b) On the set of axes provided, draw the graph that represents the information in the table:

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- c) On a public holiday her uncle pays double the rate per hour. Draw on the axes above, how that graph would look if she only works a 6 hour shift on a public holiday.

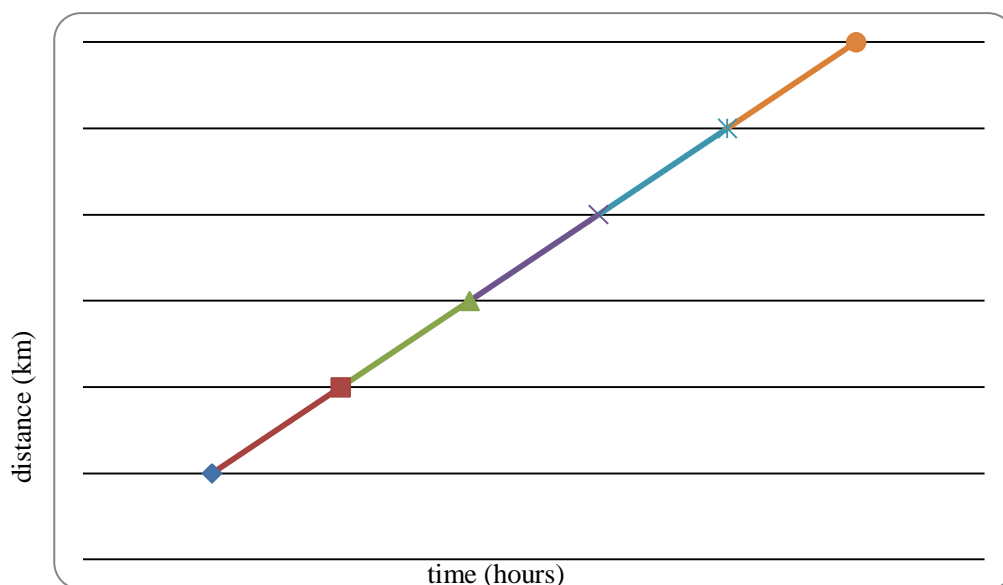
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Solution

1. a)

Time on the road (in Hours)	1	2	3	4	5	6
The distance travelled (in km)	60	120	180	240	300	360

b)



c) If the person travelled 3 more hours then they would have travelled a total distance of $360 + 3(60) = 540$ km

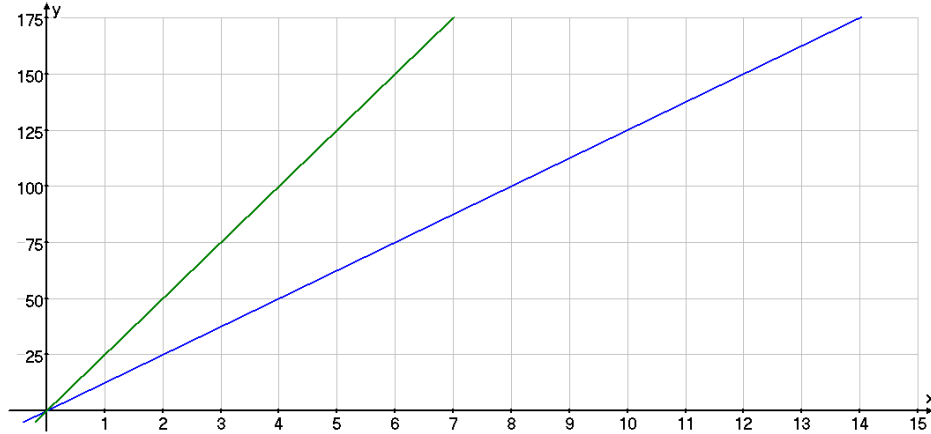
d) Distance = (time) \times 60

2. a)

Number of hours worked	1	2	3	4	6	9	11	14
Money earned in Rands	12.50	25.00	37,50	50.00	75.00	112.50	137,50	175.00

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b) and (c)



The relationship between the two rates that are paid must be explored when giving feedback. A bigger rate results in a steeper line graph.

The values in the table are also not always consecutive and this forces the learners to think structurally.

Appendix of Assignment Tools

Number pattern

Generalised Number

Functions

Distance, Speed and Time relationship

Functions

Algebraic relationships