

## 9.2 Patterns in a Table of Values

### Communicate the Ideas

1. Giselle and Tim are discussing the table of values.

<i>m</i>	3	5	7	9
<i>a</i>	1	3	5	7



a) Who is correct? Circle GISELLE or TIM.

b) How do you know? \_\_\_\_\_  
 \_\_\_\_\_

### Check Your Understanding

#### Practise

2.

<i>x</i>	<i>y</i>
1	5
2	8
3	11
4	14

a) The difference between consecutive *x*-values is \_\_\_\_\_.

( $4 - 3 =$  \_\_\_\_\_,  $3 - 2 =$  \_\_\_\_\_, and  $2 - 1 =$  \_\_\_\_\_)

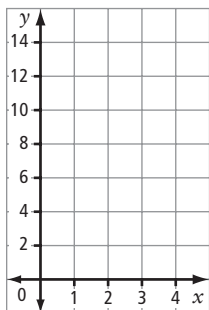
b) The difference between consecutive *y*-values is \_\_\_\_\_.

( $14 - 11 =$  \_\_\_\_\_,  $11 - 8 =$  \_\_\_\_\_, and \_\_\_\_\_)

c) Does this table of values describe a linear relation? Circle YES or NO.  
 Give 1 reason for your answer.

\_\_\_\_\_

d) Graph the table of values.



e) Look at the graph. Describe the movement from (1, 5) to the next point.

Starting at (1, 5), move

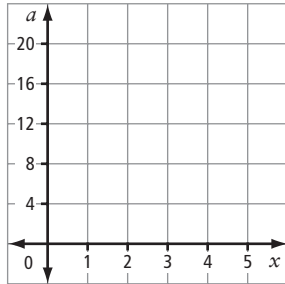
\_\_\_\_\_ unit horizontally and

\_\_\_\_\_ units vertically.

3. The table of values describes a linear relation.

<b><math>x</math></b>	0	1	2	3	4	5
<b><math>a</math></b>	0	4	8	12	16	20

- a) The difference between consecutive  $x$ -values is \_\_\_\_\_.
- b) The difference between consecutive  $a$ -values is \_\_\_\_\_.
- c) Graph the ordered pairs.
- d) Look at the graph. Describe in words how to move from  $(0, 0)$  to the next point.




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e) Write  $a$  in terms of  $x$ .

Words	Ordered Pair	Expression
$a$ is _____ times $x$	$(x, \boxed{\phantom{000}} x)$	$\boxed{\phantom{000}} x$

4.

<b><math>x</math></b>	<b><math>y</math></b>
2	7
3	10
4	13
5	16

- a) What is the difference between consecutive  $x$ -values? \_\_\_\_\_
- b) What is the difference between consecutive  $y$ -values? \_\_\_\_\_  
Is the difference the same for consecutive values? Circle YES or NO.
- c) Is the relationship in the table of values a linear relation? Circle YES or NO.  
Give 1 reason for your answer.
- d) Check by graphing.

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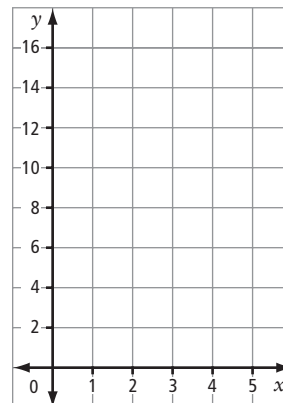
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**Apply**

5. Mara reads 90 words per minute.

a) Complete the table of values.

<b>Number of Minutes, <math>m</math></b>	1	2	3	4	5	6
<b>Number of Words, <math>w</math></b>						

b) Explain how you can find out if this is a linear relation.

\_\_\_\_\_

\_\_\_\_\_

c) If the number of minutes is  $m$ , then the expression for the number of words is

\_\_\_\_\_  $\times m$ .

d) How many words can Mara read in 15 min?

Sentence: \_\_\_\_\_

6. A community centre has a new banquet hall.  
The centre charges \$5 per person to rent the hall.

a) Complete the table of values.

<b>Number of People, <math>p</math></b>	1	20	40	60	80	100
<b>Rental Cost, <math>C</math> (\$)</b>	5					

b) If the number of people is  $p$ , then the expression for the rental cost is \_\_\_\_\_.

c) How much will it cost for 150 people?

Sentence: \_\_\_\_\_