Practice Assessment

Practice provides practice and allows you to self-reflect on your conceptual understanding of the *Lesson* skills. You will mark your work for *Practice* in each *Workbook* according to the following rubric.

Category	Strategy and Procedures	Response to Questions
	I have…	*I have…*
4	• used efficient and effective strategies to solve the problem(s)	• provided detailed explanations and followed directions appropriately to complete all questions
3	• used effective strategies to solve the problem(s)	• provided clear explanations and followed directions adequately to complete most questions
2	• used effective strategies inconsistently to solve the problem(s)	• provided incomplete explanations and followed some directions to complete a few questions
1	• used ineffective strategies to solve the problem(s)	• provided incomplete explanations and have not followed directions to complete some questions

Complete *Practice* exercises using your best work, showing all relevant steps needed to arrive at your solution. Refer to the *Module* to review lesson instructions. Contact your teacher for assistance or clarification as needed, or to investigate the topic further.

Check and correct your work using the solutions provided in *Appendix* in the *Module*.

Practice is worth 8 marks.

After you have assessed your work, reflect on your understanding of the concepts addressed in the *Practice* exercises in the table provided.

Lesson 6.3: Linear Relations

Complete the *Practice* below. When you have completed all the questions for *Lesson 6.3 Practice – III* with your best work, mark your work by first comparing your answers to the solutions provided in the *Appendix*. Then, apply the rubric found at the beginning of the *Workbook*.

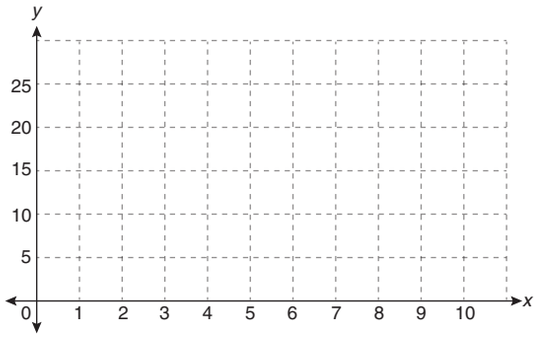
Practice – III

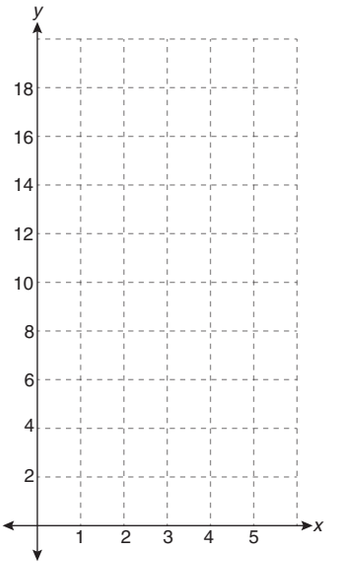
1. a. Given the following tables of values, determine the pattern in the values for each variable.

Table 1	
x	y
3	5
5	10
7	15
9	20

Table 2	
a	b
1	1
2	5
3	9
4	16

b. Graph the relation represented in each table of values.





c. Explain whether the relations are linear.

2. a. Determine the slope of the line that passes through the points

   i. $B(4,-4)$ and $C(-3,10)$

ii. $D(5,-6)$ and $E(5,3)$

iii. $G(2,-4)$ and $H(-3,-4)$

b. Describe what each line will look like when graphed.

i. _____

_____

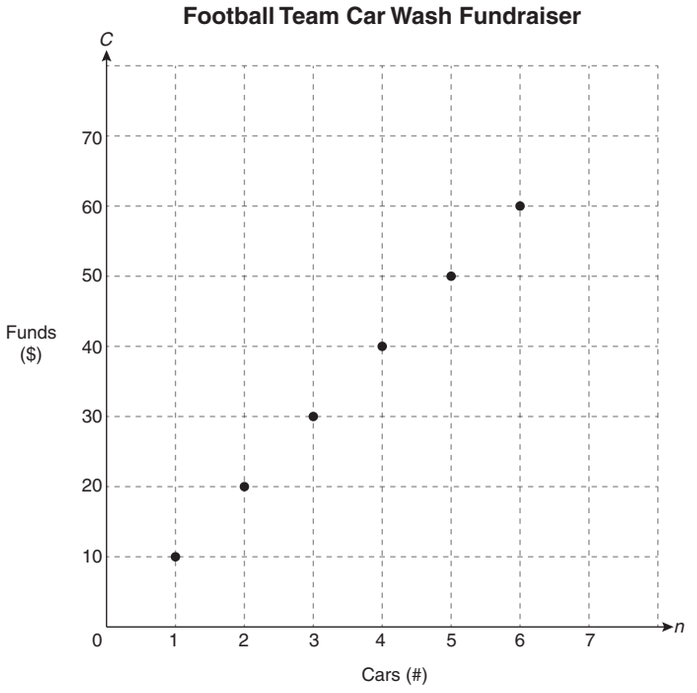
ii. _____

_____

iii. _____

_____

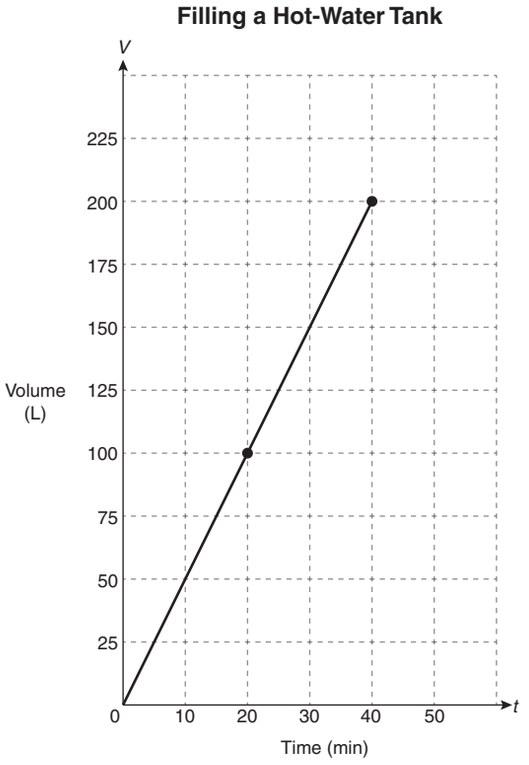
3. The graph shows the amount of money a high school football team made while hosting a car wash fundraiser.



a. Describe the pattern that indicates the graph represents a linear relation.

b. If the team earned $250, how many cars did they wash?

4. The relation representing a 200 L hot-water tank being filled at a constant rate is shown in the graph below. Determine the rate of change of the relation.

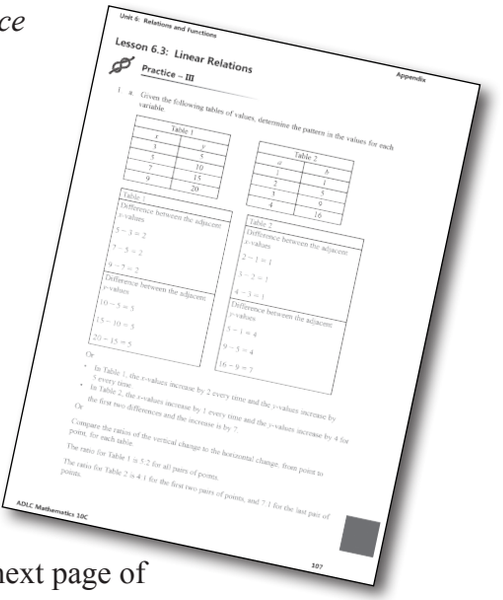


Mark your work for *Lesson 6.3 Practice – III* using the solutions provided in the *Appendix*. Then, apply the rubric found at the beginning of the *Workbook*.

Transfer your self-assessed mark to the front cover of the *Workbook*.

My self-assessed mark on *Lesson 6.3 Practice – III* is _____.

Reflect on your understanding of the concepts addressed in the *Practice* exercises in the table provided.


Unit 6: Relations and Functions

Lesson 6.3: Linear Relations

Practice – III

Appendix

1. a. Given the following tables of values, determine the pattern in the values for each variable.

Table 1

x	y
3	5
7	10
9	15
20	

Table 2

a	b
1	4
2	7
3	10
4	13

Table 1

Difference between the adjacent y-values

$5 - 3 = 2$

$7 - 5 = 2$

$9 - 7 = 2$

Difference between the adjacent y-values

$10 - 5 = 5$

$15 - 10 = 5$

$20 - 15 = 5$

Table 2

Difference between the adjacent b-values

$7 - 4 = 3$

$10 - 7 = 3$

$13 - 10 = 3$

Difference between the adjacent b-values

$4 - 1 = 3$

$7 - 4 = 3$

$10 - 7 = 3$

Or

- In Table 1, the x-values increase by 2 every time and the y-values increase by 5 every time.
- In Table 2, the b-values increase by 3 every time and the b-values increase by 4 for the first two differences and the increase is by 7.

Or

Compare the ratios of the vertical change to the horizontal change, from point to point, for each table.

The ratio for Table 1 is 5:2 for all pairs of points.

The ratio for Table 2 is 4:1 for the first two pairs of points, and 7:1 for the last pair of points.

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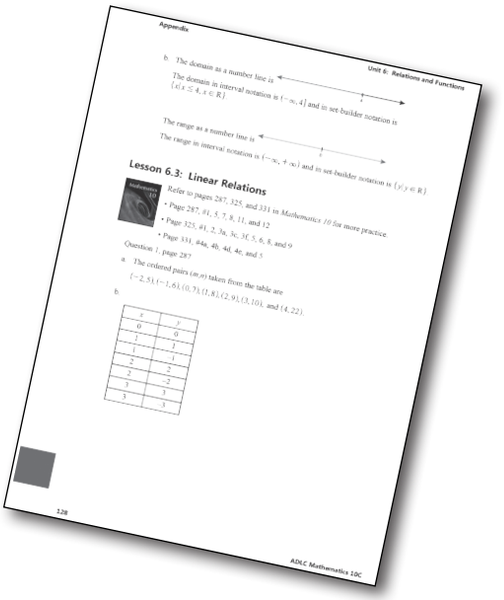
You may proceed to *Explore Your Understanding Assignment* on the next page of this *Workbook.*

Note: Before you complete *Explore Your Understanding*, you may review your skills and get more practice by completing the following problems in *Mathematics 10*.

- Page 287, #1, 5, 7, 8, 11, and 12
- Page 325, #1, 2, 3a, 3c, 3f, 5, 6, 8, and 9
- Page 331, #4a, 4b, 4d, 4e, and 5

Check your work in *Enhance Your Understanding*.


Appendix

Unit 6: Relations and Functions

b. The domain as a number line is

The domain in interval notation is $(-\infty, 4]$ and in set-builder notation is $\{x | x \leq 4, x \in R\}$

The range as a number line is

The range in interval notation is $(-\infty, +\infty)$ and in set-builder notation is $\{y | y \in R\}$

Lesson 6.3: Linear Relations

Refer to pages 287, 325, and 331 in *Mathematics 10* for more practice.

- Page 287, #1, 5, 7, 8, 11, and 12
- Page 325, #1, 2, 3a, 3c, 3f, 5, 6, 8, and 9
- Page 331, #4a, 4b, 4d, 4e, and 5

Question 1, page 287

a. The ordered pairs (m, n) taken from the table are

$(-2, 5), (-1, 6), (0, 7), (1, 8), (2, 9), (3, 10)$, and $(4, 22)$.

b.

x	y
0	3
1	0
1	1
2	1
2	2
3	-2
3	3
3	-3

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