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.

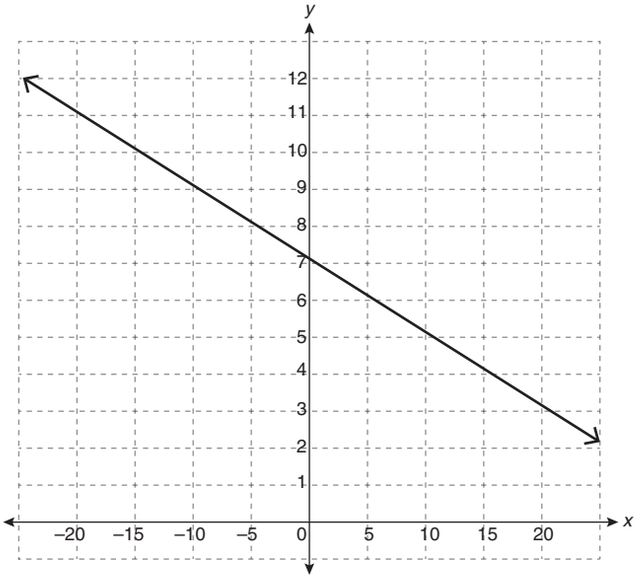
After you have assessed your work, reflect on your understanding of the concepts addressed in the *Practice* exercises in the table provided.

Lesson 7.1: Slope-Intercept Form of a Linear Equation

Complete the *Practice* below. When you have completed all the questions for *Lesson 7.1 Practice – I* 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 – I

1. State the slope and y-intercept of the following graph. Explain how you determined each.



2. Write each of the following equations in slope-intercept form.

   a. $y + 6 = 3x$

   b. $x = 3y - 18$

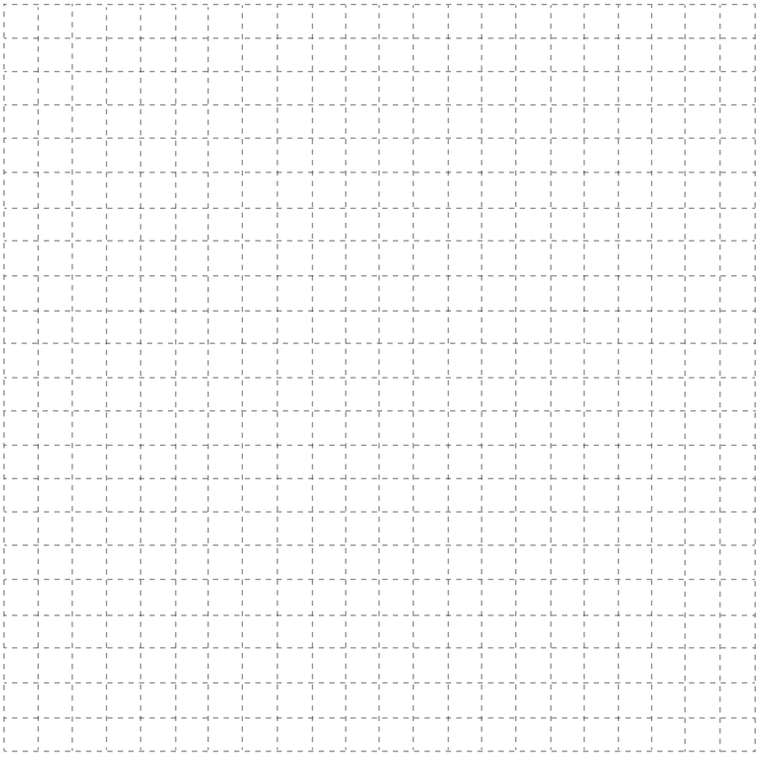
   c. $3x + 12y + 22 = 0$

3. Consider the slope-intercept form of a linear equation, $y = mx + b$.

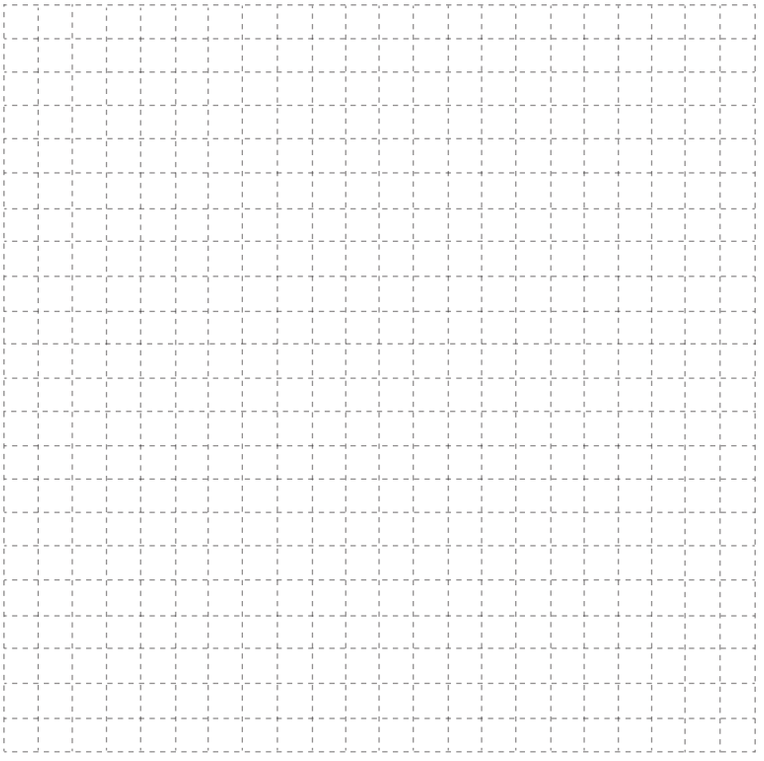
   a. Explain how this form can be used to graph a relation by hand.

b. Graph each of the following.

i. $y = \frac{3}{5}x + 7$



ii. $y = -200 - 40x$



4. Explain how technology could be used to check your graphs from question 3.

5. The graph of a linear relation with a slope of 5.8 passes through the point (–2,–5). Determine an equation for the relation, in slope-intercept form.

6. a. Explain how you can use the equation $y = 4.592x - 8.387$ to determine points on the corresponding graph.

   b. State three points that could be used to graph the relation $y = 4.592x - 8.387$.

7. A plumbing company installs tankless hot water heaters and charges for both installation time and materials used.

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a. The heater and supplies cost $1 800 and the shop charges $110/h for a plumber and an apprentice. Write an equation to represent the total cost to the customer. Be sure to state what each variable represents.

_____

_____

b. i. What is the slope of the relation?

_____

ii. What is the vertical-axis intercept of the relation?

_____

c. Sketch the graph of the relation.

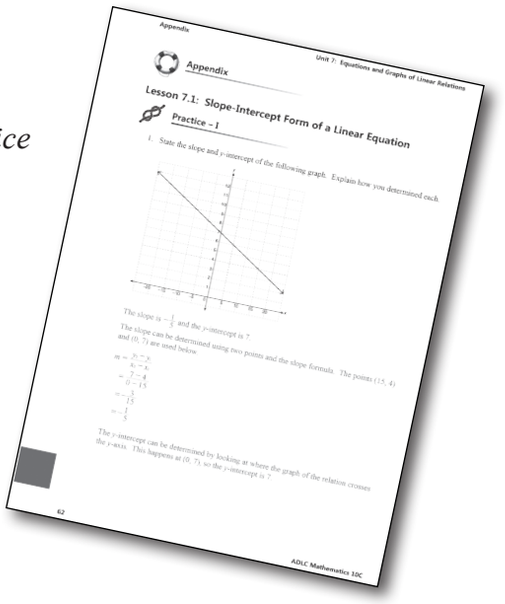
d. If the installation takes 2 hours, how much will the customer be charged?

e. If a customer was charged $2185, how long did the installation take?

Mark your work for *Lesson 7.1 Practice – I* 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 7.1 Practice – I* is _____.


Appendix

Unit 7: Equations and Graphs of Linear Relations

Appendix

Lesson 7.1: Slope-Intercept Form of a Linear Equation

Practice – I

1. State the slope and *y*-intercept of the following graph. Explain how you determined each.

The slope is $-\frac{1}{3}$ and the *y*-intercept is 7.

The slope can be determined using two points and the slope formula. The points (15, 4) and (0, 7) are used below.

$m = \frac{y_2 - y_1}{x_2 - x_1}$

$= \frac{7 - 4}{0 - 15}$

$= \frac{3}{-15}$

$= -\frac{1}{5}$

The *y*-intercept can be determined by looking at where the graph of the relation crosses the *y*-axis. This happens at (0, 7), so the *y*-intercept is 7.

62

ADLC Mathematics 10C

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

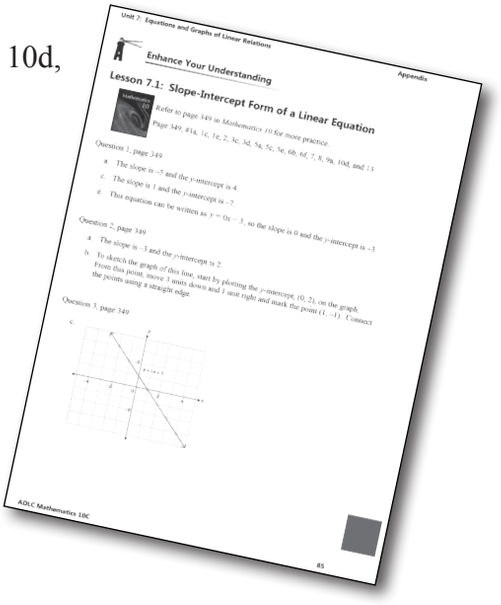
Question Number	Got it!	Almost there…	Need to retry or ask for help.
1			
2			
3			
4			
5			
6			
7			

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 349, #1a, 1c, 1e, 2, 3c, 3d, 5a, 5c, 5e, 6b, 6f, 7, 8, 9a, 10d, and 13

Check your work in *Enhance Your Understanding*.


Unit 7: Equations and Graphs of Linear Relations

Enhance Your Understanding

Appendix

Lesson 7.1: Slope-Intercept Form of a Linear Equation

Refer to page 349 in *Mathematics 10* for more practice.

Page 349, #1a, 1c, 1e, 2, 3c, 3d, 5a, 5c, 5e, 6b, 6f, 7, 8, 9a, 10d, and 13

Question 1, page 349

a. The slope is -5 and the *y*-intercept is 4.

c. The slope is 1 and the *y*-intercept is -7.

e. This equation can be written as $y = 0x - 3$, so the slope is 0 and the *y*-intercept is -3.

Question 2, page 349

a. The slope is -3 and the *y*-intercept is 2.

b. To sketch the graph of this line, start by plotting the *y*-intercept, (0, 2), on the graph. From this point, move 3 units down and 1 unit right and mark the point (1, -1). Connect the points using a straight edge.

Question 3, page 349

c.

ADLC Mathematics 10C

85