Practice Assessment

Practice provides practice and allows you to self-reflect on your conceptual understanding of the *Lesson* skills. Your 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 8.1: Systems of Linear Equations and Graphs

Complete the *Practice* below. When you have completed all the questions for *Lesson 8.1 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. Graph the following system of equations.

$2x + y - 4 = 0$

$y - 2 = \frac{1}{3}(x - 1)$

2. Explain what the intersection point of the lines represents.

3. Graphically solve each of the following linear systems.

a. $y = x$ and $y = -2$

b. $5x - 6y + 4 = 0$ and $y - 2 = \frac{3}{2}(x - 1)$

c. $p + q = 6$ and $p - q = -2$

4. Megan was trying to determine whether the point (–3,0) was a solution to the following system of equations.

$y = 6x - 20$

$y = -\frac{1}{3}x - 1$

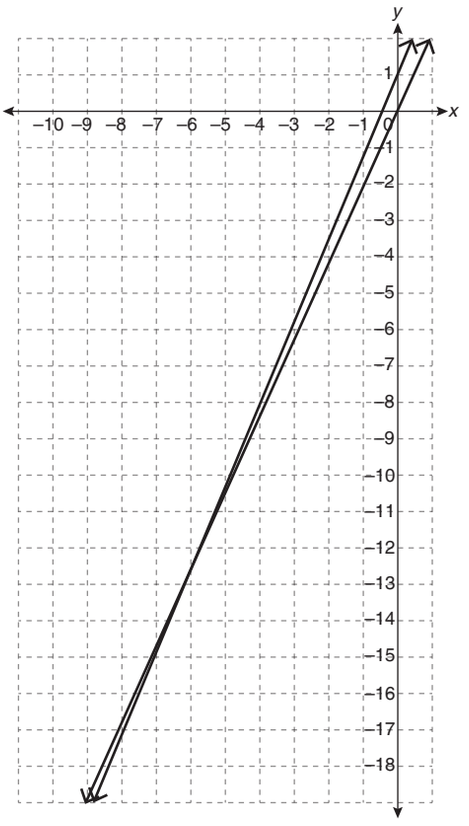
She wrote the following and concluded (–3,0) was not a solution.

Left Side	Right Side
y	$6x - 20$
0	$6(-3) - 20$
	-38
LS ≠ RS	

Megan then showed her work to Faith, who said it was incomplete because Megan didn't check both equations.

Explain how this discussion could be resolved.

5. Toby drew the following graph while trying to determine the solution to a linear system of equations.



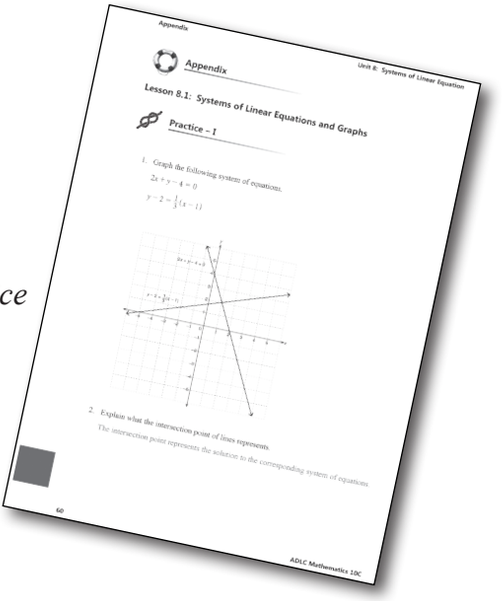
a. Explain why it is difficult to use Toby's graph to determine a solution to the system of equations.

b. Suggest an improvement to the graph that will make determining a solution easier.

Mark your work for *Lesson 8.1 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 8.1 Practice – I* is _____.


Appendix

Unit 8: Systems of Linear Equation

Appendix

Lesson 8.1: Systems of Linear Equations and Graphs

Practice – 1

1. Graph the following system of equations.

$2x + y - 4 = 0$

$y - 2 = -\frac{1}{3}(x - 1)$

2. Explain what the intersection point of lines represents.

The intersection point represents the solution to the corresponding system of equations.

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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			

Please return to *Lesson 8.1* to continue your work in *Unit 8: Systems of Linear Equations*.

Lesson 8.1: Systems of Linear Equations and Graphs

Complete the *Practice* below. When you have completed all the questions for *Lesson 8.1 Practice – II* 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 – II

1. Describe a strategy that can be used to determine the number of solutions to a system of linear equations.

2. Austin has found that both (13,17) and (24,61) are solutions to a system of linear equations. How are the two lines related? Explain.

3. Use technology to determine an approximate solution to each of the following systems of linear equations.

   a. $y = 22x - 9.5$ and $y = 2.5x + 4.1$

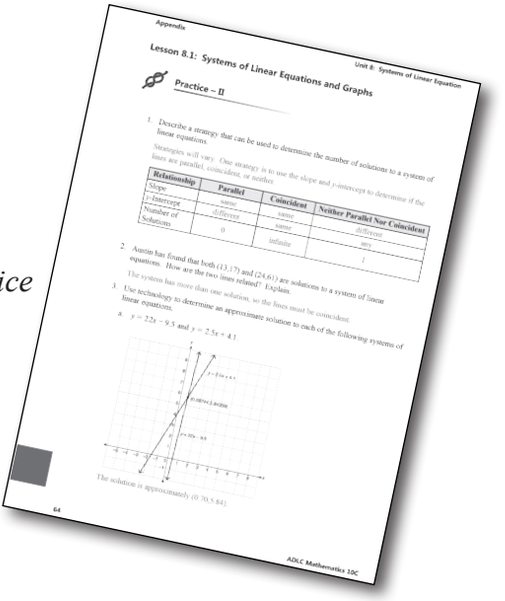
   b. $8x + y - 18 = 0$ and $5x + 9y + 4 = 0$

c. $6x + y = 12$ and $5x + 8y = -100$

Mark your work for *Lesson 8.1 Practice – II* 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 8.1 Practice – II* is _____.


Appendix

Unit 8: Systems of Linear Equation

Lesson 8.1: Systems of Linear Equations and Graphs

Practice – II

1. Describe a strategy that can be used to determine the number of solutions to a system of linear equations.

Strategies will vary. One strategy is to use the slope and y-intercept to determine if the lines are parallel, coincident, or neither.

Relationship	Parallel	Coincident	Neither Parallel Nor Coincident
Slope	same	same	different
y-Intercept	different	same	different
Number of Solutions	0	infinite	1

2. Austin has found that both (13,17) and (24,63) are solutions to a system of linear equations. How are the two lines related? Explain.

The system has more than one solution, so the lines must be coincident.

3. Use technology to determine an approximate solution to each of the following systems of linear equations.

a. $y = 2.2x - 9.5$ and $y = 2.5x + 4.1$

The solution is approximately (0.70,-8.04).

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ADLC Mathematics 10C

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

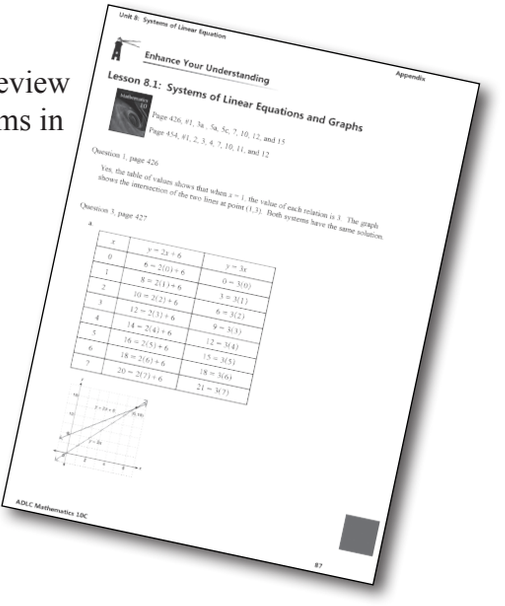
Question Number	Got it!	Almost there…	Need to retry or ask for help.
1			
2			
3			

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 426, #1, 3a, 5a, 5c, 7, 10, 12, and 15
- Page 454, #1, 2, 3, 4, 7, 10, 11, and 12

Check your work in *Enhance Your Understanding*.


Unit 8: Systems of Linear Equation

Enhance Your Understanding

Appendix

Lesson 8.1: Systems of Linear Equations and Graphs

Page 426, #1, 3a, 5a, 5c, 7, 10, 12, and 15

Page 454, #1, 2, 3, 4, 7, 10, 11, and 12

Question 1, page 426

Yes, the table of values shows that when $x = 1$, the value of each relation is 3. The graph shows the intersection of the two lines at point (1,3). Both systems have the same solution.

Question 3, page 427

a.

x	$y = 2x + 6$	$y = 3x$
0	$6 = 2(0) + 6$	$0 = 3(0)$
1	$8 = 2(1) + 6$	$3 = 3(1)$
2	$10 = 2(2) + 6$	$6 = 3(2)$
3	$12 = 2(3) + 6$	$9 = 3(3)$
4	$14 = 2(4) + 6$	$12 = 3(4)$
5	$16 = 2(5) + 6$	$15 = 3(5)$
6	$18 = 2(6) + 6$	$18 = 3(6)$
7	$20 = 2(7) + 6$	$21 = 3(7)$

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