

ALBERTA DISTANCE LEARNING CENTRE
Mathematics 10C
MAT1791
Workbook 8.1

Student's Questions and Comments

FOR STUDENT USE ONLY	
Student Name:	

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<p>Assigned to</p> <p>_____</p>	
<p>Marked by</p> <p>_____</p>	
<p>Date received</p> <p>_____</p>	

Summary

	Marks Earned	Total Possible Marks	Percent
8.1 Practice – I	I have ____ /8 and ____ %.		
8.1 Practice – II	I have ____ /8 and ____ %.		
Lesson 8.1 Assignment		13	

Teacher's Comments:

Teacher's Signature

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Workbook 8.1

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4601 - 63 Avenue
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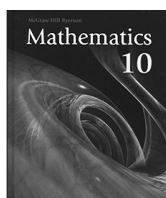
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Practice Assessment

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

Category	Strategy and Procedures	Response to Questions
	<i>I have...</i>	<i>I have...</i>
4	<ul style="list-style-type: none"> used efficient and effective strategies to solve the problem(s) 	<ul style="list-style-type: none"> provided detailed explanations and followed directions appropriately to complete all questions
3	<ul style="list-style-type: none"> used effective strategies to solve the problem(s) 	<ul style="list-style-type: none"> provided clear explanations and followed directions adequately to complete most questions
2	<ul style="list-style-type: none"> used effective strategies inconsistently to solve the problem(s) 	<ul style="list-style-type: none"> provided incomplete explanations and followed some directions to complete a few questions
1	<ul style="list-style-type: none"> used ineffective strategies to solve the problem(s) 	<ul style="list-style-type: none"> 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 in the table provided at the end of each *Practice* section.

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*.

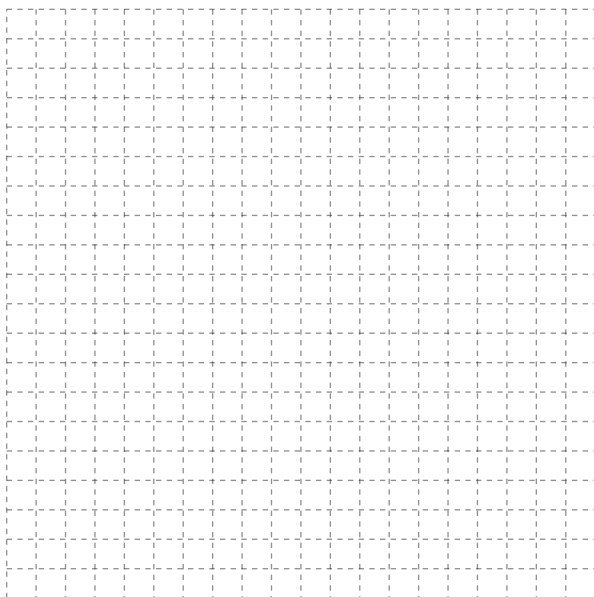


Practice – I

1. Graph the following system of equations.

$$2x + y - 4 = 0$$

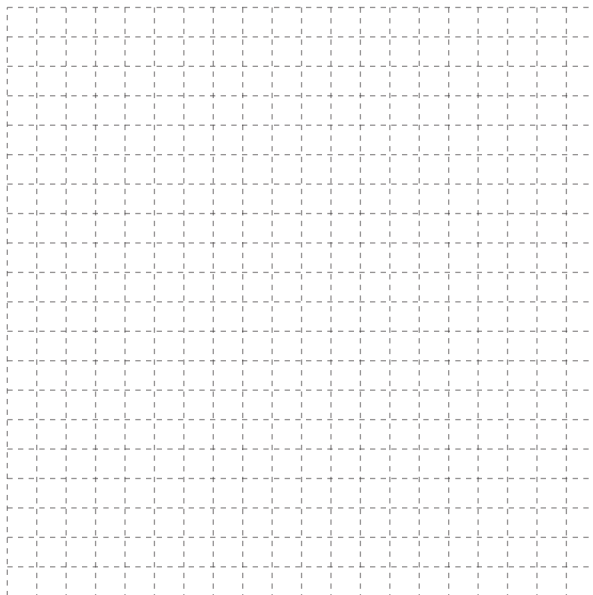
$$y - 2 = \frac{1}{3}(x - 1)$$



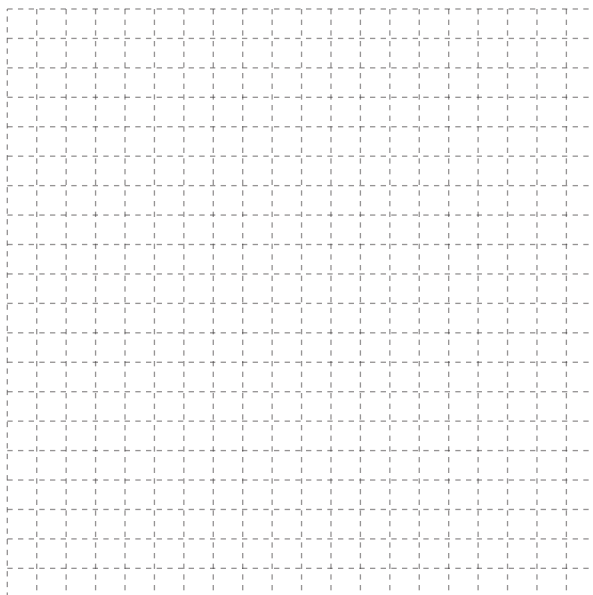
2. Explain what the intersection point of the lines represents.

3. Graphically solve each of the following linear systems.

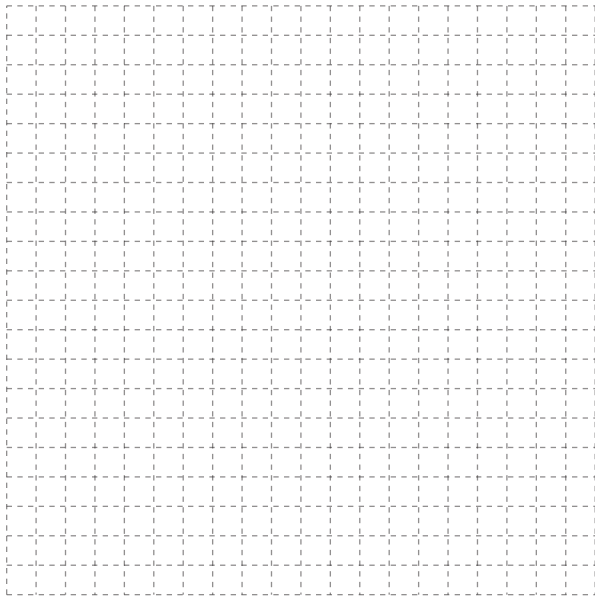
a. $y = x$ and $y = -2$



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.

$$y = 6x - 20$$

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

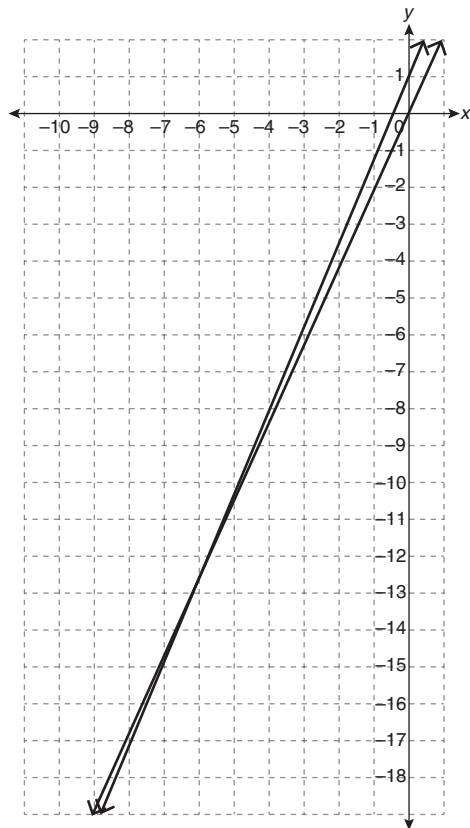
She wrote the following and concluded $(-3,0)$ was not a solution.

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

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.

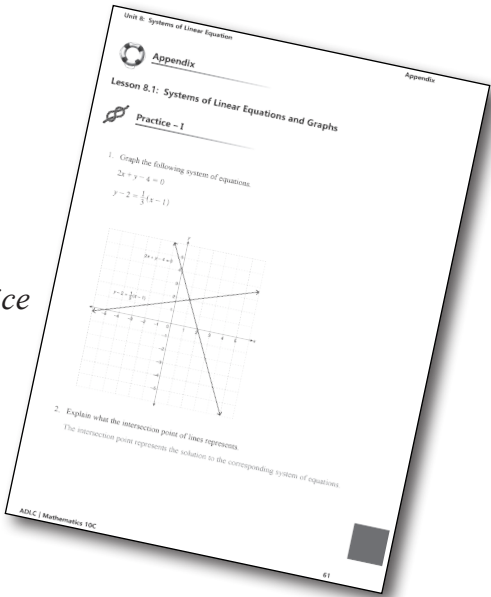
Mark your work for *Lesson 8.1 Practice – I* using the solutions provided in the *Appendix*. Then, apply the rubric found at the beginning of the *Workbook*.

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

My self-assessed mark on *Lesson 8.1 Practice – I* is _____.

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*.



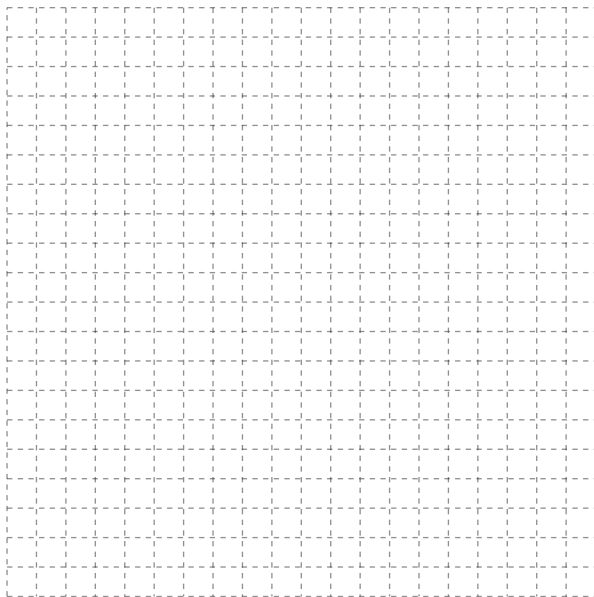
Practice – II

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

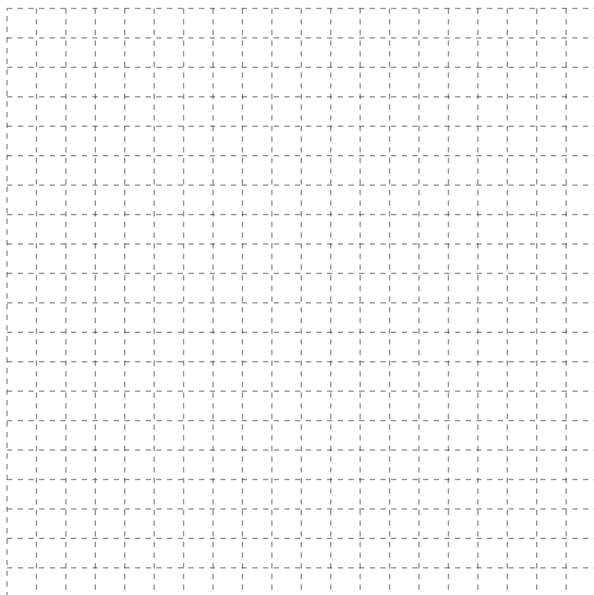
2. Austin has found that both $(13, 17)$ and $(24, 61)$ are solutions to a system of linear equations. How are the two lines related? Explain.

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

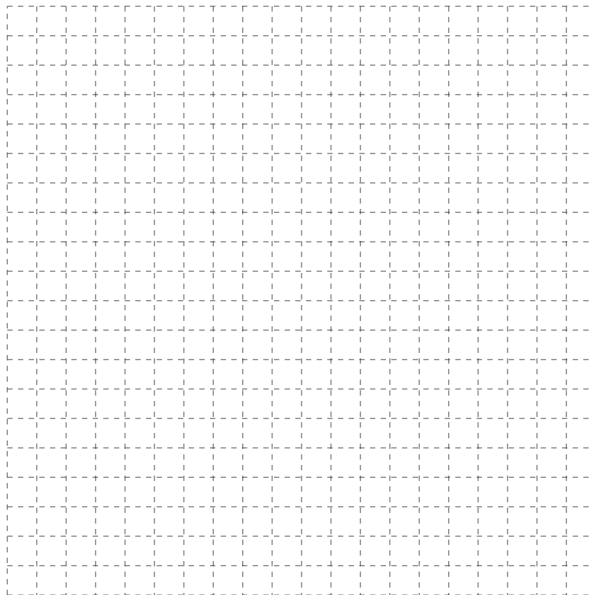
a. $y = 22x - 9.5$ and $y = 2.5x + 4.1$



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



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



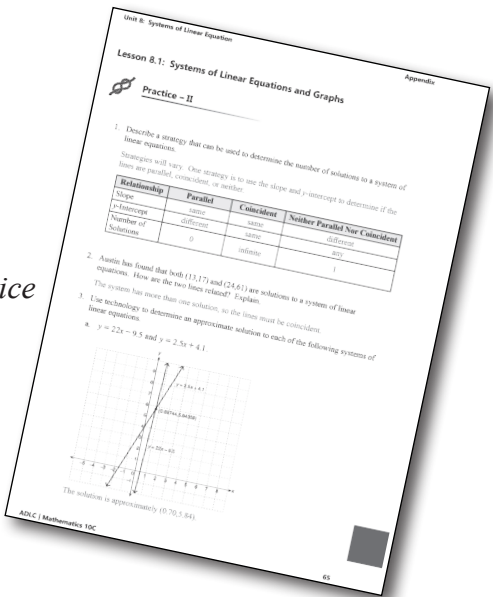
Mark your work for *Lesson 8.1 Practice – II* using the solutions provided in the *Appendix*. Then, apply the rubric found at the beginning of the *Workbook*.

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

My self-assessed mark on *Lesson 8.1 Practice – II* is _____.

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			

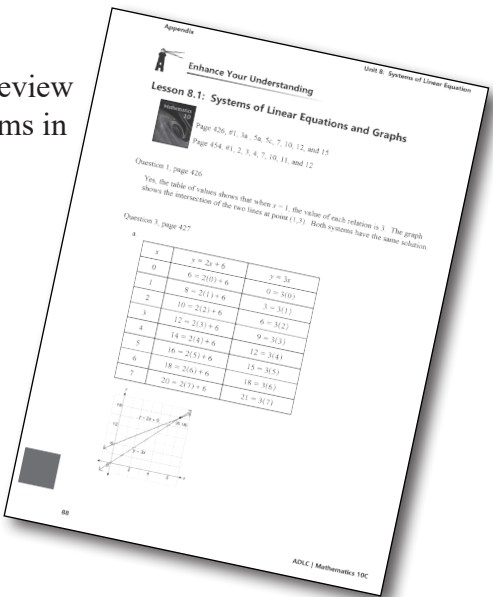


You may proceed to *Explore Your Understanding Assignment* on the next page of this *Workbook*.

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*.

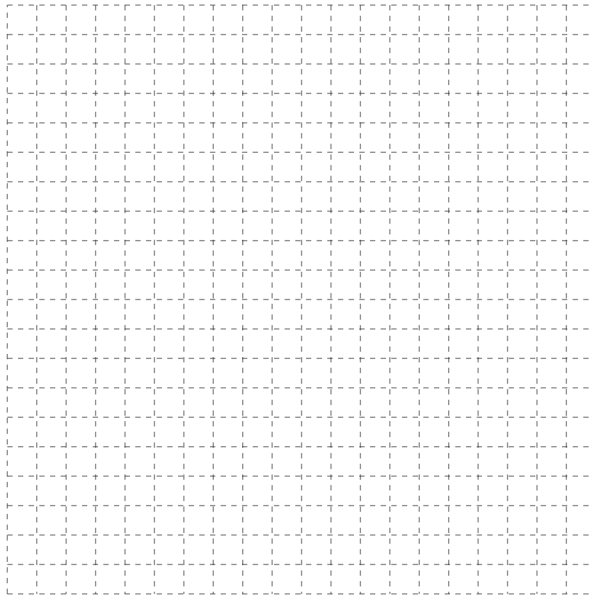


Lesson 8.1: Graphing Systems of Linear Equations**Explore Your Understanding Assignment**

1. Consider the linear system of equations $y = \frac{2}{5}x - 1$ and $2x - 3y + 1 = 0$.

①

- a. Graph the system of equations.



①

- b. What is the solution to the system of equations?

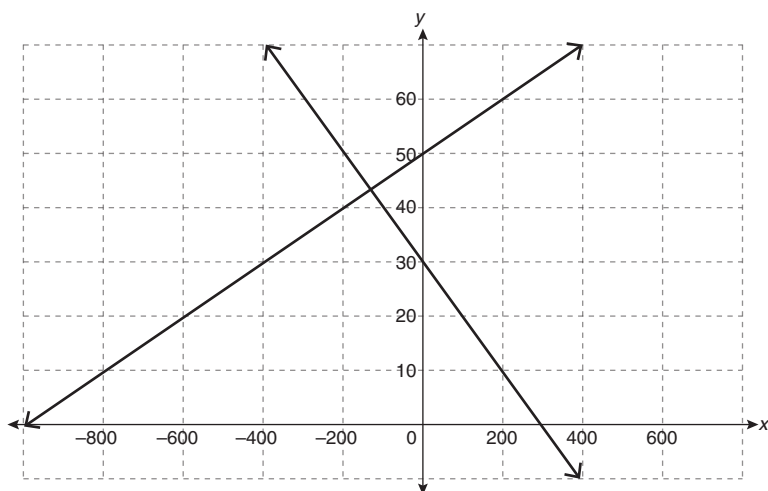
①

- c. Verify the solution.

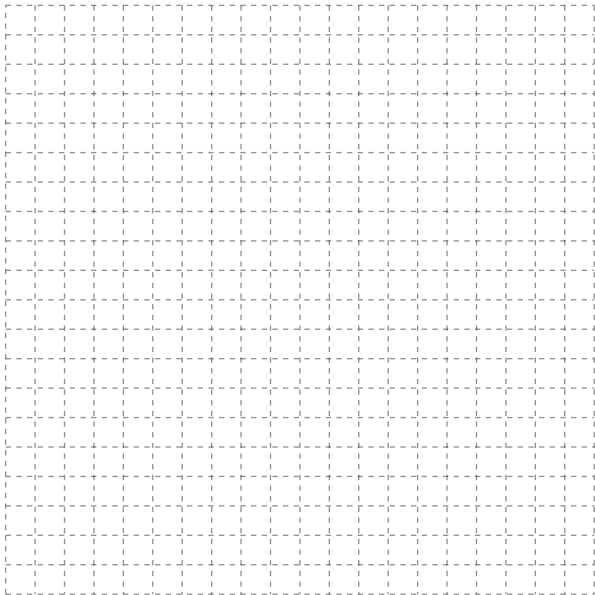
- ① 2. Explain whether or not the following table of values includes a solution to the system of linear equations it represents.

x	y_A	y_B
-4	-8	-13
-2	-5	-9
0	-2	-5
2	1	-1
4	4	3
6	7	7
8	10	11
10	13	15

- ① 3. Estimate the solution to the following system.



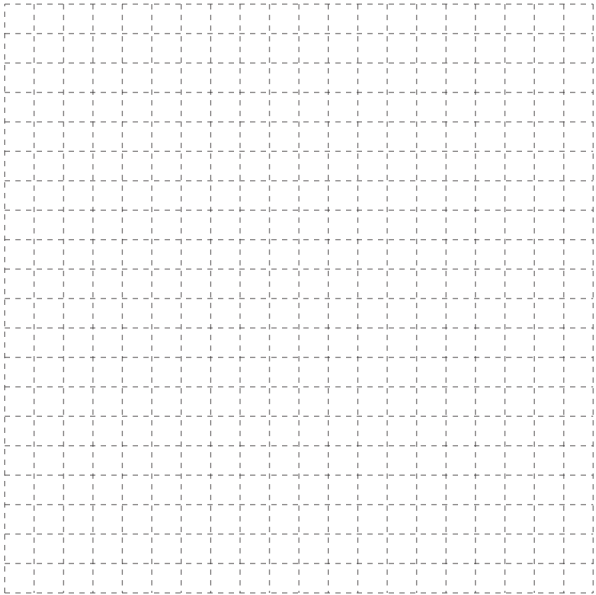
- ② 4. Use technology to determine an approximate solution to the system $y = -0.44x + 12.6$ and $y = -7.21x - 55.6$. Explain the procedure.



- ② 5. y_A and y_B represent continuous linear relations. Some values from the relations are shown in the table below.

x	y_A	y_B
-8	-5	-15
-3	-6	-11

Solve the system.



6. Berit created the following tables of values for a linear system. She concluded that there is no solution to the system.

x	y
-3	8
-2	10
-1	12
0	14
1	16
2	18
3	20
4	22

x	y
-3	-2
-2	0
-1	2
0	4
1	6
2	8
3	10
4	12

Is Berit’s conclusion reasonable? Explain.
