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 2: Solutions* in the *Module*.

Practice is worth 8 marks; your mark can help you gauge your understanding of *Lesson* material.

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: Solving Systems of Equations Graphically

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 *Appendix 2: Solutions*. Then, apply the rubric found at the beginning of the *Workbook*.

Practice – I

1. Solve the following systems of equations graphically. Verify the solution(s) by substitution.

   a. $y = 3x^2 - 7$ and $x = 3$

b. $y = -\frac{1}{2}x^2 + \frac{3}{2}x + 3$ and $y = \frac{1}{4}x^2 - 3$

c. $y = 5x^2 + 1$ and $y = 2x^2$

d. $32s - r + 400 = 0$ and $r = 8.4s^2 + 7s - 220$

2. Describe advantages and disadvantages associated with using technology to solve a system of equations graphically.

3. An archer is standing at the base of an incline and shoots an arrow uphill. If the archer is standing at the point (0, 0), the path of the arrow can be modeled by $y = -0.002x^2 + x + 1.5$. If the slope of the incline is 0.3, at which coordinates will the arrow land?

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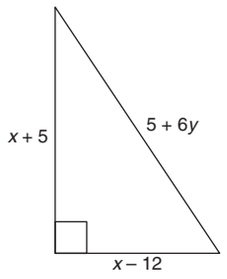
4. The equations $y = -3(x-2)^2 + k$ and $y = 2$ form a system. State the value(s) of k that will provide a system with

   a. no solution

   b. one solution

   c. two solutions

5. The perimeter of the triangle shown is 40 and the area is $15y$. Determine the value(s) of x and y.



6. The equations $y = ax$ and $y = x^2$ form a system that intersects at the point (0, 0) for any a value.

   a. Explain why there is only one solution when $a = 0$.

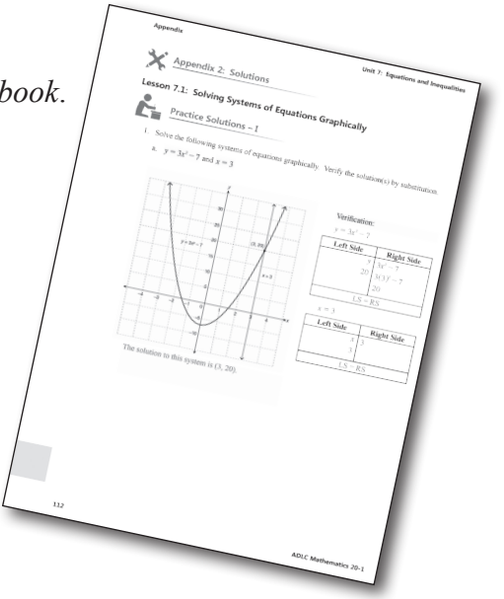
   b. Predict whether or not there are other a values for which the system has only one solution. (Hint: Try graphing the system using different values of a to get a feel for its effect.)

   c. Describe a method that can be used to test the prediction.

Mark your work for *Lesson 7.1 Practice – I* using the solutions provided in *Appendix 2: Solutions*. 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

Appendix 2: Solutions

Unit 7: Equations and Inequalities

Lesson 7.1: Solving Systems of Equations Graphically

Practice Solutions – I

1. Solve the following systems of equations graphically. Verify the solution(s) by substitution.

a. $y = 3x^2 - 7$ and $x = 3$

Verification:

Left Side	Right Side
y	$3x^2 - 7$
20	$3(3)^2 - 7$
	20

LS = RS

$x = 3$

Left Side	Right Side
x	3
3	

LS = RS

The solution to this system is (3, 20).

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

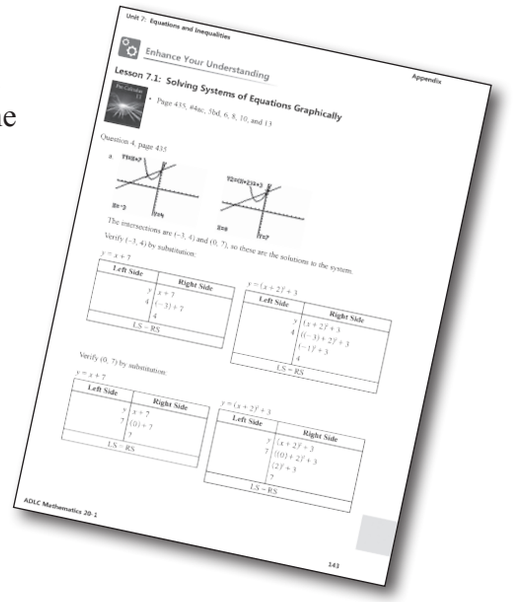
Question Number	Got it!	Almost there…	Need to retry or ask for help.	Similar questions from *Pre-Calculus 11*
1				p.435 #4ac, 5bd
2				
3				p.437 #10
4				p.436 #8
5				p.437 #13
6				p.436 #6

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 *Pre-Calculus 11*.

- Page 435, #4ac, 5bd, 6, 8, 10, and 13

Check your work in *Enhance Your Understanding*.


Unit 7: Equations and Inequalities

Enhance Your Understanding

Appendix

Lesson 7.1: Solving Systems of Equations Graphically

Pre-Calculus 11

Page 435, #4ac, 5bd, 6, 8, 10, and 13

Question 4, page 435

a.

The intersections are (−3, 4) and (0, 7), so these are the solutions to the system.

Verify (−3, 4) by substitution:

$y = x + 7$

Left Side	Right Side
y	$x + 7$
4	$(-3) + 7$
	4

LS = RS

$y = (x + 2)^2 + 3$

Left Side	Right Side
y	$(x + 2)^2 + 3$
4	$((-3) + 2)^2 + 3$
	$(-1)^2 + 3$
	4

LS = RS

Verify (0, 7) by substitution:

$y = x + 7$

Left Side	Right Side
y	$x + 7$
7	$(0) + 7$
	7

LS = RS

$y = (x + 2)^2 + 3$

Left Side	Right Side
y	$(x + 2)^2 + 3$
7	$((0) + 2)^2 + 3$
	$(2)^2 + 3$
	7

LS = RS

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