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.

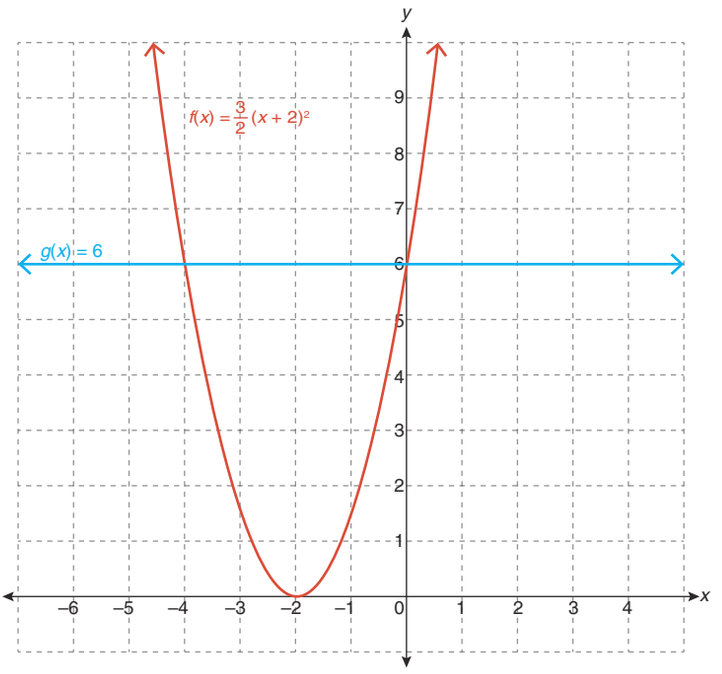
Lesson 7.4: Quadratic Inequalities in One Variable

Complete the *Practice* below. When you have completed all the questions for *Lesson 7.4 Practice – IV* 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 – IV

1. Solve the inequality $(x+3)(x-5) < 0$. Represent the solution symbolically and on a number line. Verify the solution.

2. While trying to solve the inequality $\frac{3}{2}(x+2)^2 \geq 6$, Abagail drew the following graph.



a. Explain how this graph can be used to solve the inequality.

b. Solve the inequality.

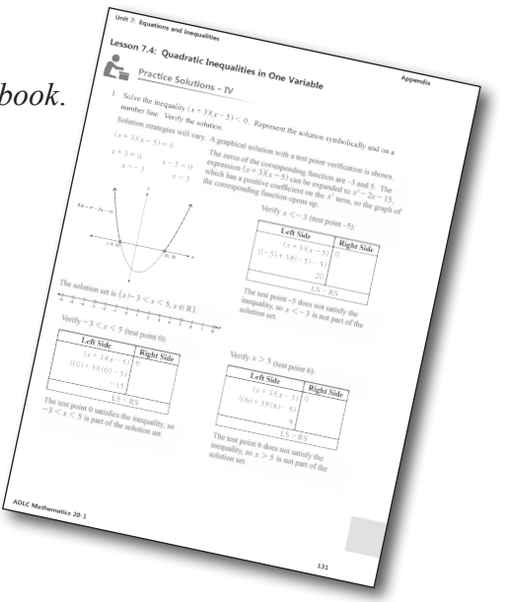
3. Solve $x^2 < 2x + 6$. Represent the solution symbolically and on a number line.

4. If the quadratic function corresponding to a quadratic inequality has no real zeros, the solution set for the inequality will either be empty or include all real numbers. Explain why this is true.

Mark your work for *Lesson 7.4 Practice – IV* 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 7.4 Practice – IV* is _____.


Unit 7: Equations and Inequalities

Lesson 7.4: Quadratic Inequalities in One Variable

Appendix

Practice Solutions – IV

1. Solve the inequality $(x+3)(x-5)<0$. Represent the solution symbolically and on a number line. Verify the solution.

Solution strategies will vary. A graphical solution with a test point verification is shown.

$(x+3)(x-5)=0$

$x+3=0 \quad x-5=0$

$x=-3 \quad x=5$

The zeros of the corresponding function are -3 and 5. The expression $(x+3)(x-5)$ can be expanded to $x^2-2x-15$, which has a positive coefficient on the x^2 term, so the graph of the corresponding function opens up.

The solution set is $\{x \mid -3<x<5, x \in R\}$.

Verify $x<-3$ (test point -5):

Left Side	Right Side
$(x+3)(x-5)$	0
$((-5)+3)((-5)-5)$	
20	

LS > RS

The test point -5 does not satisfy the inequality, so $x<-3$ is not part of the solution set.

Verify $-3<x<5$ (test point 0):

Left Side	Right Side
$(x+3)(x-5)$	0
$((0)+3)((0)-5)$	
-15	

LS < RS

The test point 0 satisfies the inequality, so $-3<x<5$ is part of the solution set.

Verify $x>5$ (test point 6):

Left Side	Right Side
$(x+3)(x-5)$	0
$((6)+3)((6)-5)$	
9	

LS > RS

The test point 6 does not satisfy the inequality, so $x>5$ is not part of the solution set.

ADLC Mathematics 20-1

131

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.484 #1, 2
2				p.485 #7ab
3				p.485 #4ac
4				

Please return to *Lesson 7.4* to continue your work in *Unit 7: Equations and Inequalities*.