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; your mark can help you gauge your understanding of *Lesson* materials.

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

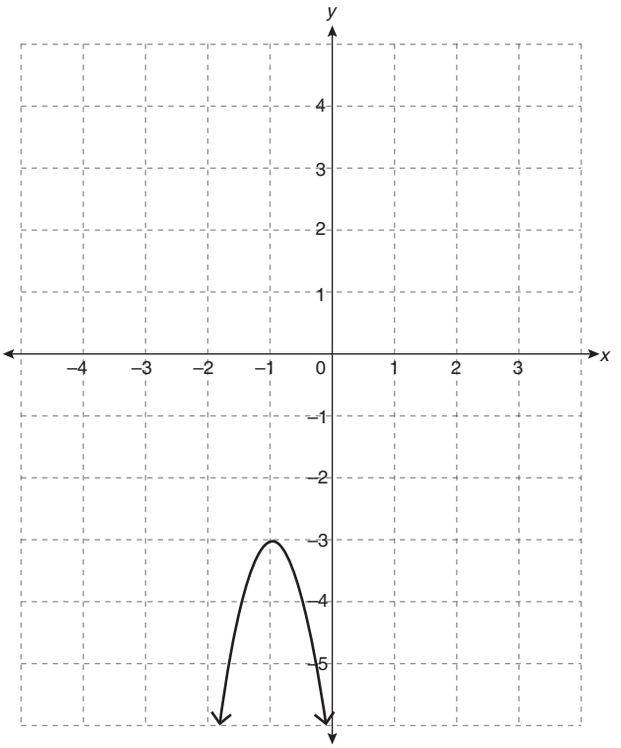
Lesson 2.1: Quadratic Functions Expressed in Vertex Form

Complete the *Practice* below. When you have completed all the questions for *Lesson 2.1 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*.

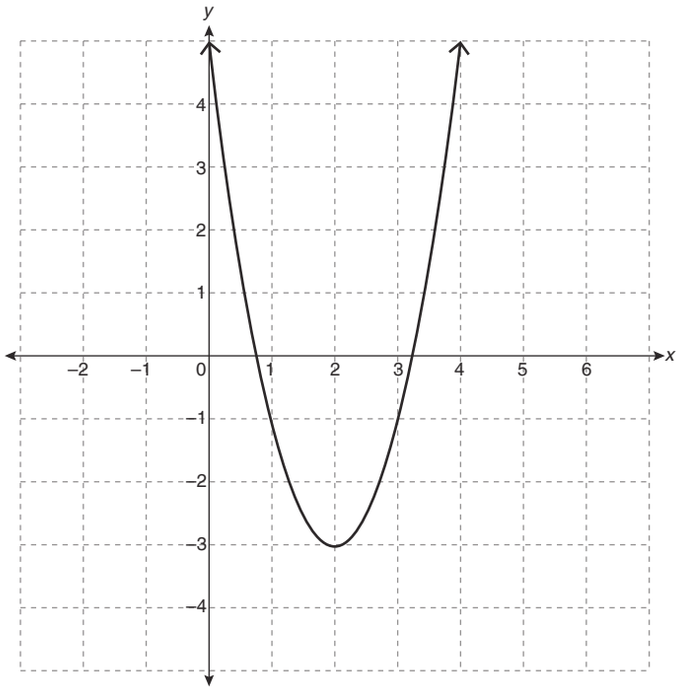
Practice – I

1. Given the graph of a quadratic function, determine the vertex.

a.



b.



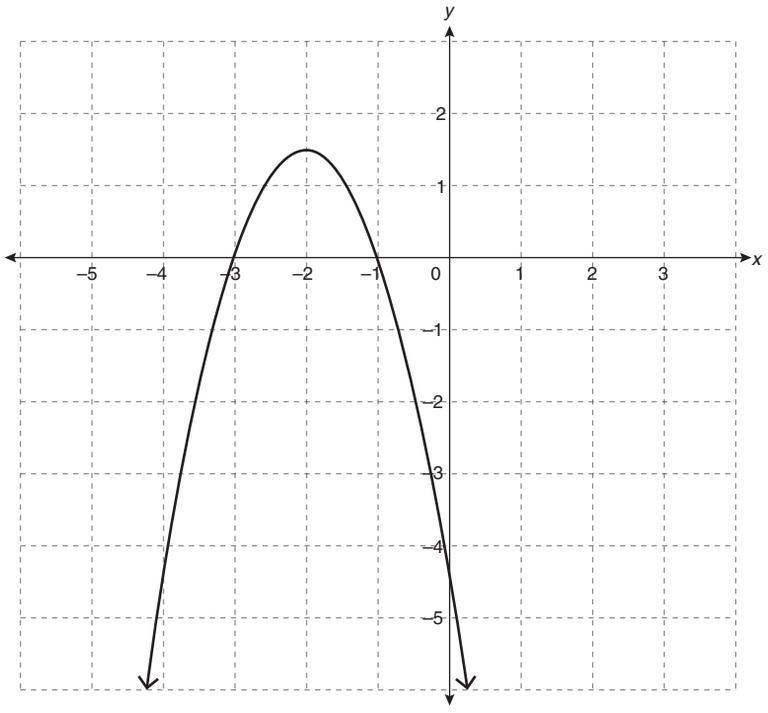
2. Without graphing, determine the equation of the axis of symmetry of the following quadratic functions. Verify by graphing.

   a. $f(x) = -\frac{1}{2}(x-3)^2 + 4$

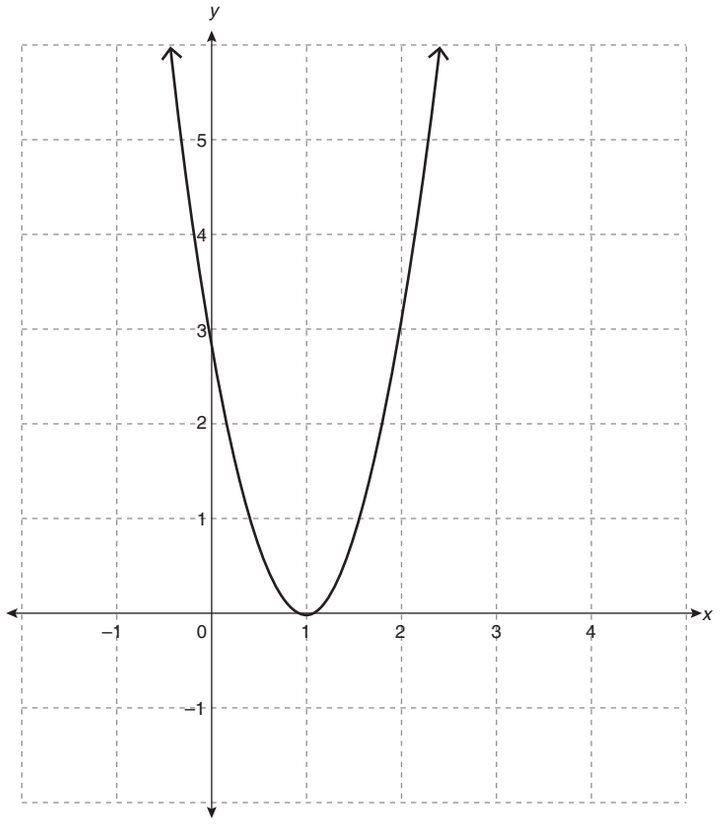
b. $g(x) = 3(x + 5)^2 - 1$

3. Given the following graphs of quadratic functions, determine the direction of opening and give the maximum or minimum value.

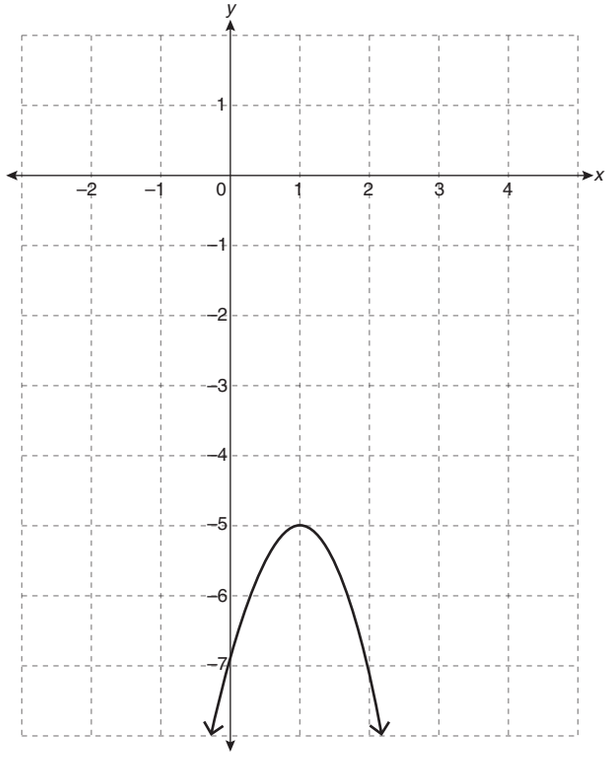
a.



b.



c.



4. Without graphing, determine the domain, range, and the number of x-intercepts of the graph of the following quadratic functions. Verify by graphing.

   a. $f(x) = -4(x+2)^2 + 1$

   b. $g(x) = 2(x+3)^2 + 4$

c. $h(x) = -10(x-3)^2$

5. The graph of the basic quadratic function $f(x) = x^2$ is translated 5 units to the right and 2 units down.

   a. What is the vertex of the graph of the transformed function?

   _____

   _____

   b. What is the equation of the transformed function?

   _____

   _____

   c. How many x-intercepts does the graph of the function have?

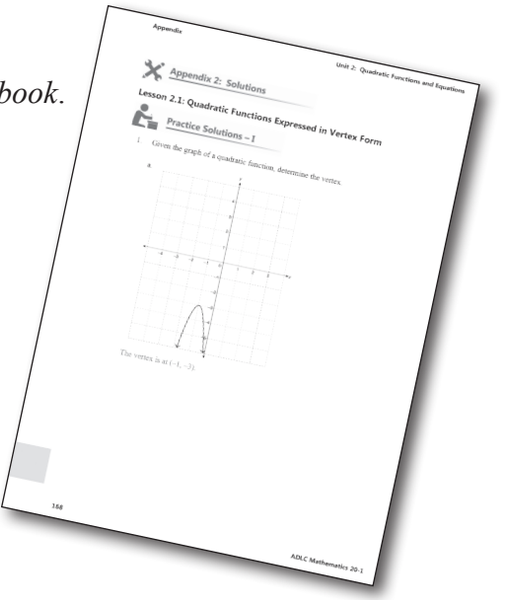
   _____

   _____

Mark your work for *Lesson 2.1 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 2.1 Practice – I* is _____.


Appendix

Unit 2: Quadratic Functions and Equations

Appendix 2: Solutions

Lesson 2.1: Quadratic Functions Expressed in Vertex Form

Practice Solutions – I

1. Given the graph of a quadratic function, determine the vertex.

a.

The vertex is at (–1, –3).

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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. 157 #5
2				p. 157 #2all, 6a, 7acd
3				p. 157 #5
4				p. 157 #1ac, 6bcdef, 7acd
5				p. 157 #3cd, 10, 11

Please return to *Lesson 2.1* to continue your work in *Unit 2: Quadratic Functions and Equations*.