Unit 2: Quadratic Functions Lesson 2.4

Coach's Corner – VII

The cross-section of the Calgary Saddledome roof is parabolic. The lowest point of the saddle is 14 metres below the highest point. The length of the Saddledome's roof is 140 metres.

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a. Sketch a graph of the curve that can be used to represent the roof.

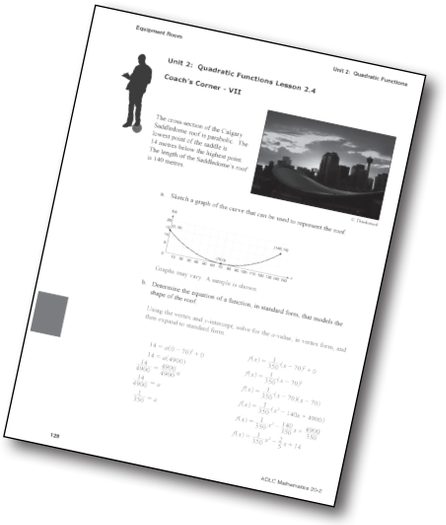
b. Determine the equation of a function, in standard form, that models the shape of the roof.

c. State the domain and range of the function.

Domain:
Range:

2. Rick sells cotton candy at the Nanton Candy Store. He sells each bag for $2.00. At this price, he sells 60 bags per day. He did an experiment for a month and found that every $0.50 increase in price resulted in three fewer sales per day. At what price should Rick sell his cotton candy to maximize his revenue from cotton candy sales?

Please go to the *Equipment Room* to check your solutions before proceeding to *Game On!*, on the next page of this *Workbook*.


Equipment Room

Unit 2: Quadratic Functions Lesson 2.4

Coach's Corner - VIt

The cross-section of the Calgary Saddledome roof is parabolic. The lowest point of the saddle is 14 metres below the highest point. The length of the Saddledome's roof is 140 metres.

a. Sketch a graph of the curve that can be used to represent the roof.

Graphs may vary. A sample is shown.

b. Determine the equation of a function, in standard form, that models the shape of the roof.

Using the vertex and *x*-intercept, solve for the *a*-value, in vertex form, and then expand to standard form.

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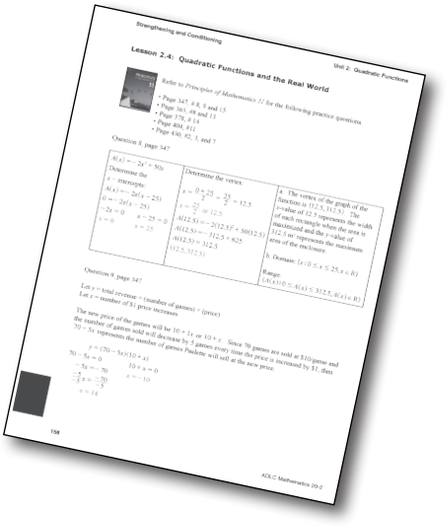
After you have assessed your work, reflect upon your understanding of the concepts addressed in the *Coach's Corner* exercises in the table provided.

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

Note: Before you complete *Game On!*, you may review your skills and get more practice be completing the following problems in *Principles of Mathematics 11*.

- Page 347, #8, 9, and 15
- Page 365, #8 and 13
- Page 378, #14
- Page 404, #11
- Page 430, #2, 3, and 7


Strengthening and Conditioning

Unit 2: Quadratic Functions

Lesson 2.4: Quadratic Functions and the Real World

Refer to *Principles of Mathematics 11* for the following practice questions:

- Page 347, #8, 9 and 15
- Page 365, #8 and 13
- Page 378, #14
- Page 404, #11
- Page 430, #2, 3, and 7

Question 8, page 347

Question 9, page 347

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Check your work in *Strengthening and Conditioning*.