66. a. The swimming pool in Problem 64a is painted with sealers that cost $0.80 per square foot for the sides and $1.20 per square foot for the bottom of the pool. Write a polynomial that gives the cost of sealing the pool.

b. How much would it cost to seal the pool in Problem 64b?

For Problems 67–70 see Example 12.

67. Writewell, Inc. makes fountain pens. It costs Writewell $5x + 400 dollars to manufacture x pens, and the company realizes $13x - 0.005x^2$ dollars from the sale of the pens.

a. Write an expression for the profit Writewell earns from the sale of x pens.

b. What is the profit (or loss) on the sale of 600 pens?

68. It costs The Sweetshop $4x + 200 dollars to produce x pounds of chocolate cream. The company brings in $8.8x - 0.004x^2$ dollars on the sale of the chocolate cream.

a. Write an expression for The Sweetshop’s profit from the sale of x pounds of chocolate cream.

b. What is the profit (or loss) on the sale of 200 pounds?

69. It costs an appliance manufacturer $300x + 200 dollars per week to produce x top-loading washing machines, which will then bring in weekly revenues of $506x - 0.08x^2$ dollars.

a. Write an expression for the weekly profit from producing x washing machines.

b. What is the profit (or loss) from 60 washing machines?

70. A company can produce x lawn mowers per week for $120x + 80$ dollars. The sale of the lawn mowers will generate $200x - 0.3x^2$ dollars in weekly revenue.

a. Write an expression for the weekly profit from producing x lawn mowers.

b. What is the profit (or loss) from 200 lawn mowers?

For Problems 71–74 refer to the geometric formulas in the Review of Elementary Topics.

71. a. Write a polynomial that gives the area of the speaker frame (the shaded region) pictured.

b. If x = 8 inches, find the area of the frame. Use $\pi = 3.14$.

\[ \text{PROBLEM 71} \]

\[ \text{PROBLEM 72} \]

*The Review of Elementary Topics, which follows the preface, provides a reference for basic notions from elementary algebra and geometry.