

Name: \_\_\_\_\_

Date: \_\_\_\_\_

**BLM 7-6**

## Section 7.1 Math Link

This worksheet will help you with the Math Link on page 263.

Landscape designs for gardens may include rectangular areas for flower beds, lawns, patios, and pools. As a landscape designer, you sometimes need to:

- Calculate the volume of material, such as soil, gravel, water, or mulch, needed to fill these areas to a certain depth
- Calculate the area that a known volume of material will cover

The following are the formulas for these calculations:

Volume = area  $\times$  depth

$$\text{Area} = \frac{\text{volume}}{\text{depth}}$$

$$1 \text{ m} = 100 \text{ cm}$$

$$1 \text{ cm} = 0.01 \text{ m}$$

- 1.** A flower box is in the shape of a rectangular prism.
  - a)** Write a formula for the rectangular base area of the flower box. Use  $A$  for area,  $l$  for length, and  $w$  for width.
  
  
  
  
  
  
  
  
  
  
  - b)** The flower box will be filled with dirt. Write a formula to find the volume the box will hold. Use  $V$  for volume. Use a depth of your choice.
  
  
  
  
  
  
  
  
  
  
  - c)** Explain any coefficient you used.

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(continued)

**2.** A pond is in the shape of a cylinder.

**a)** Write a formula for the circular base area of the pond. Use  $A$  for area and  $r$  for radius.

**b)** The pond will be filled with water. Write a formula to find the volume the pond will hold. Use  $V$  for volume. Use a depth of your choice.

**c)** Explain any coefficient you used.