Name: _____ Date: _____

BLM 7–4

# Chapter 7 Problems of the Week

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| **1.** May is painting two solid shapes. One is a right triangular prism with a base of 22.5 $cm^2$ and a height of 12 cm. The other shape is a rectangular prism with a square base of 64 $cm^2$ and a height of 5 cm. Which shape will require more paint? | **2.** When finding the volume of a right rectangular prism or a right triangular prism, a teacher points out to the students that a *base* is not necessarily the bottom of the solid. What does this mean? |
| **3.** Using two pieces of 21.6-cm by 28-cm paper, construct one cylinder with a height of 28 cm and another cylinder with a height of 21.6 cm. Find the difference in volume of the two cylinders.<br>**a)** Which cylinder has the greater volume? Express your answers to one decimal place.<br>**b)** Were you surprised by your results? Explain. | **4.** A solid block with dimensions of 4 cm by 4.5 cm by 5 cm is placed inside a rectangular container with dimensions of 8 cm by 9 cm by 10 cm. What is the volume of the space not occupied by the solid block? |
| **5.** Marina is about to paint a cylinder with a diameter of 10 cm and a length of 61 cm. Her container of paint will cover 324 $cm^2$ of surface area. How many of these containers does she need to completely cover the cylinder? | **6.** A planter in the shape of a rectangular prism has a height of 1.5 m, a width of 3 m, and a length of 4 m. If the planter were filled with dirt to within 0.25 m of the top of the planter, how many 0.5-$m^3$ wheelbarrow loads would it take to fill it? |