LESSON 12.4

NAME _____ DATE _____

Real-Life Application: When Will I Ever Use This?

For use with pages 743–749

Mailing Packages

Once in a while you may have to send someone a package in the mail. Whether you are sending someone a gift or returning a previously purchased item, you need to pick the appropriate type of packaging. Packaging comes in many different sizes to accommodate your needs. The following are a few packaging tips.

- Select a package that is durable enough to protect its contents.
- Cushion the package contents with packing materials like newspaper and bubble wrap.
- Always use tape that is designed for shipping.
- The delivery and return addresses should be well marked on the package and an index card with the same information should be placed *inside* the package as well.
- Packages that weigh one or more pounds should be taken to the post office for mailing.

In Exercises 1–6, use the following information.

You work part-time at the "Pack-it and Mail-it" that sells containers used for shipping items. Your photography teacher asks you to recommend the best package to ship 35mm film containers. The film containers are 1 inch in diameter and 2 inches in height, and they are to be shipped in groups of twelve. At work you get a list of package sizes. Your store has 4 box sizes that look like they might work. The sizes are given in the form $l \times w \times h$. They are 3 in. $\times$ 2 in. $\times$ 5 in., 4 in. $\times$ 3 in. $\times$ 2 in., 5 in. $\times$ 6 in. $\times$ 5 in., and 3 in. $\times$ 2 in. $\times$ 3 in. You now have to see which one will fit a dozen film containers with the least amount of wasted space.

1. Find the volume of one film container. Round your result to two decimal places.
2. Find the volume of twelve film containers. Round your result to two decimal places.
3. What is the volume of each package?
4. Which container has a volume that is closest to the volume that you need?
5. Will the package in Exercise 4 work? Why or why not?
6. Which is the next closest size? How can you pack the film containers?