

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

For use with pages 153–159

Recycling

In 1998, with a 62.8% recycling rate, the aluminum can was the most prevalent recycled packaging container in the United States. The benefits to recycling aluminum cans are numerous. The environment benefits from conservation of valuable energy and natural resources, as well as reduced landfill space. The volume of aluminum cans reaching a landfill today makes up only 1.1% of the total consumer waste. The aluminum industry itself also benefits, for recycling requires 95% less energy than producing aluminum from the ore and creates a large portion of the actual metal supply. Finally, the consumer benefits, with earnings of \$990 million in 1998 alone. The money paid for the aluminum provides personal income for individuals, funds for charities, and often operating revenues for city-sponsored recycling programs.

The aluminum industry has also helped the recycling effort by continuously decreasing the weight and increasing the recycled content of aluminum cans. In 1998, the number of cans per pound was up to approximately 33 and the recycled content of a can was about 58%. Although the industry's ultimate goal is to recycle 100% of the aluminum cans, the progress made in the last 25 years is amazing!

In Exercises 1–4, use the following information.

You decide to recycle aluminum cans to make some extra spending money. The Cans-for-Cash Recycling Center pays \$0.48 per pound of aluminum cans. The Earth Saver Recycling Center pays \$0.42 per pound of aluminum cans and a flat fee of \$1.80 if you crush the cans.

1. Write an equation to help you decide which recycling center you will go to.
2. Solve the equation to find the weight at which you would receive the same amount at either recycling center.
3. You have 10 pounds of recycled aluminum cans. Which recycling center would you go to? Explain.
4. You have 40 pounds of recycled aluminum cans. Which recycling center would you go to? Explain.