Name _____

Packing Boxes

Your Challenge

You are in charge of choosing boxes to pack your company's products in. On the **Recording Sheet**, draw or describe the box or boxes you might choose for each situation below.

1. The box must have a volume of 80 cubic inches and be at least 5 inches tall.

2. You need two boxes each with a volume of 60 cubic inches. One box must be twice as tall as the other.

Is there more than one possible solution?

1
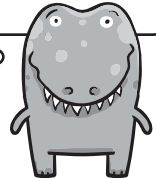
Packing Boxes

1. **Answers will vary. Some possible answers are shown below.**
   16 inches × 1 inch × 5 inches = 80 cubic inches
   8 inches × 2 inches × 5 inches = 80 cubic inches
   4 inches × 4 inches × 5 inches = 80 cubic inches

2. **Answers will vary. Possible answer shown.**
   Box 1: 10 inches × 2 inches × 3 inches = 60 cubic inches
   Box 2: 10 inches × 1 inch × 6 inches = 60 cubic inches

Swimming Pools

Your Challenge

You are in charge of designing a rectangular pool for a customer's backyard. On the **Recording Sheet**, draw or describe the pool you would design for each situation below.

1. The pool will be inside a fenced area that is 20 feet long and 15 feet wide. There needs to be at least 2 feet of space between the fence and the edge of the pool on all sides. The entire pool must be 5 feet deep and have a volume greater than 600 cubic feet. What is the volume of the pool you would design?

2. You need to design a pool for another customer with the same volume as the first pool but different dimensions. What could the dimensions of this pool be?

Swimming Pools

1. **Answers will vary. Possible answer: 16 feet × 11 feet × 5 feet = 880 cubic feet**

2. **Answers will vary. Possible answer: 11 feet × 10 feet × 8 feet = 880 cubic feet**