**MAXIMIZING VOLUME PRACTICE**

1. Matthew is constructing a rectangular prism with a surface area of 800 in2. It will have the largest volume possible. Find the dimensions and volume of the prism.
2. Yasmin is constructing a tin box using exactly 196 cm2 of tin. The prism will have the largest possible volume. Find the dimensions and volume of the prism.
3. A rectangular prism has a surface area of 0.85 m2. Determine the dimensions that maximize the volume, and state the volume.
4. You are creating packaging for a mail order company. They have designed a spherical product. Their current shipping containers have a surface area of 1000 cm2. Determine the volume of the largest sphere that can be shipped in the container.