Author 1 _____

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25 – Optimization

1. A large storage crate, with an open top, is to be constructed. The base needs to be a square. Material for the base costs \$10 per square meter, and material for the sides costs \$6 per square meter. If there is \$100 available to spend on the crate, what is the greatest volume of crate that can be built?

2. A large storage crate, with an open top, is to be constructed. The length of the base needs to be twice the width of the base and the volume must be $10\,\mathrm{m}^3$. Material for the base costs \$10 per square meter, and material for the sides costs \$6 per square meter. What is the cost of the materials for the cheapest such container.