# 6.G Handout 2
## Solutions

1. The base of a rectangular prism has an area of $\frac{1}{4}$ ft$^2$, and the height of the prism is $\frac{2}{3}$ ft. What is the volume of the prism? $\frac{1}{6}$ ft$^3$

2. The lengths of the edges of a right rectangular prism are 0.2 cm, 0.8 cm, and 3 cm. What is the volume of the prism? 0.48 cm$^3$

3. A cardboard box has edges of length 10.5 in, 6 in, and 3.5 in. What is the volume of the box? 220.5 in$^3$

4. The edge lengths of a right rectangular prism are $\frac{1}{4}$ meter, $\frac{1}{2}$ meter, and $\frac{2}{3}$ meter. How many unit cubes with edge lengths of $\frac{1}{12}$ meter can fit inside? 144 cubes

5. The base of a right rectangular prism has an area of 20.5 cm$^2$. If the volume of the prism is 112.75 cm$^3$, what is the height of the prism? 5.5 cm

6. The height of a right rectangular prism is 12.4 inches. If the volume of the prism is 199.64 inches$^3$, what is the area of the base of the prism? 16.1 inches$^2$

7. The edge lengths of a right rectangular prism are $\frac{2}{5}$ meter, $\frac{1}{2}$ meter, and $\frac{3}{5}$ meter. How many unit cubes with edge lengths of $\frac{1}{10}$ meter can fit inside? 120 cubes

8. A pillbox is in the shape of a right rectangular prism. If it's edge lengths are 3 cm, 2.5 cm, and 2.5 cm, what is the volume of the pillbox? 18.75 cm$^3$

9. A swimming pool is in the shape of a right rectangular prism. If the pool is 0.05 km long, 0.02 km wide, and 0.01 km deep, how much water can the swimming pool hold in km$^3$? 0.00001 km$^3$

10. A trailer on a freight truck is in the shape of a right rectangular prism. The trailer is 30 feet long, 10 feet wide, and 8.5 feet tall. The trailer is to be filled with identical boxes that have edges of length 2.5 feet, 2 feet, and 1.7 feet. How many boxes can fit inside the trailer? 300 boxes