



## Equal Volume - set samples - paper 1

1. Two cuboid tanks hold the same volume. Bill's first tank is 2cm by 80cm by 5cm. The second is 8cm tall with a square base. Find the side length of the base.

ans \_\_\_\_\_

2. A container created by John has dimensions 5cm by 2cm by 117cm. He wants another container with the same volume, measuring 13cm long and 15cm wide. Calculate its height.

ans \_\_\_\_\_

3. Eddie builds a cuboid box measuring 3cm by 3cm by 32cm. He wants a second box with the same volume, a length of 6cm and a width of 12cm. What height must the second box have?

ans \_\_\_\_\_



## Equal Volume - set samples - Answers

1. Volume of first tank =  $2 \times 80 \times 5 = 800 \text{ cm}^3$   
Second tank volume =  $800 \text{ cm}^3$   
Base area =  $800 \div 8 = 100 \text{ cm}^2$   
Square base length =  $\sqrt{100} = 10 \text{ cm}$   
Answer: 10 cm
2. Volume of first container =  $5 \times 2 \times 117 = 1170 \text{ cm}^3$   
Second container volume =  $1170 \text{ cm}^3$   
Base area =  $13 \times 15 = 195 \text{ cm}^2$   
Height =  $1170 \div 195 = 6 \text{ cm}$   
Answer: 6 cm
3. Volume of first box =  $3 \times 3 \times 32 = 288 \text{ cm}^3$   
Second box volume =  $288 \text{ cm}^3$   
Base area =  $6 \times 12 = 72 \text{ cm}^2$   
Height =  $288 \div 72 = 4 \text{ cm}$   
Answer: 4 cm