



## Problem of the Week

### Problem C

### Hidden Space

Two students are building storage boxes in woodworking class. The first student builds a box in the form of a cube with each edge measuring 60 cm. The second student builds a box in the shape of a rectangular prism with width  $w$  cm, height 30 cm and depth 45 cm. Surprisingly, each student's box has the same total surface area.

Determine which student's box has the greatest volume. How much greater is the volume?

