

## The Problem of the Month July, 2021

You work in the shipping department of Mister Adderley's Cannonball Emporium. A customer has just ordered five cannonballs. Your job is to pack them in the smallest box, by volume. The box must have rectangular parallel opposite sides. You consider two configurations. The first places four of the balls with their centers making a square. The fifth ball is then placed in the central indentation on top. See below, left. The second configuration places three balls so that their centers make an equilateral triangle and the two remaining balls are placed in the central indentations above and below the three making up the triangle. See below, right. Find the length, width and height the smallest box in each case, given that each cannonball has radius 1.

