Problem of the Week

Problem C

‘Cube’ism

As an artist, Ernest is doing a solo show titled CUBES. One of his pieces is shown below. Each layer of the piece is a cube. The bottom cube has a side length of 3 m, the middle cube has a side length of 2 m, and the top cube has a side length of 1 m. The top two layers are each centred on the layer below.

Ernest wishes to paint the piece. Since the piece will be suspended in the air, the bottom will also be painted. Determine the total surface area of the piece, including the bottom.