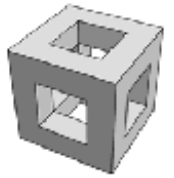




11. A  $4 \times 4 \times 4$  cube has three  $2 \times 2 \times 4$  holes drilled symmetrically all the way through, as shown.

What is the surface area of the resulting solid?

- A 192      B 144      C 136      D 120      E 96



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11. **D** Each of the original faces of the cube now has area  $4 \times 4 - 2 \times 2$ , that is 12. In addition, the drilling of the holes has created 24 rectangles, each measuring  $2 \times 1$ . So the required area is  $6 \times 12 + 24 \times 2 = 120$ .