

UNIT 2 EXERCISES 1-5

3D Geometry

- 2007A 2. An aquarium has a rectangular base that measures 100 cm by 40 cm and has a height of 50 cm. It is filled with water to a height of 40 cm. A brick with a rectangular base that measures 40 cm by 20 cm and a height of 10 cm is placed in the aquarium. By how many centimeters does the water rise?
- (A) 0.5 (B) 1 (C) 1.5 (D) 2 (E) 2.5
- 2003A 3. A solid box is 15 cm by 10 cm by 8 cm. A new solid is formed by removing a cube 3 cm on a side from each corner of this box. What percent of the original volume is removed?
- (A) 4.5 (B) 9 (C) 12 (D) 18 (E) 24
- 2012A 3. A box 2 centimeters high, 3 centimeters wide, and 5 centimeters long can hold 40 grams of clay. A second box with twice the height, three times the width, and the same length as the first box can hold n grams of clay. What is n ?
- (A) 120 (B) 160 (C) 200 (D) 240 (E) 280

2009A

5. One dimension of a cube is increased by 1, another is decreased by 1, and the third is left unchanged. The volume of the new rectangular solid is 5 less than that of the cube. What was the volume of the cube?

(A) 8 (B) 27 (C) 64 (D) 125 (E) 216