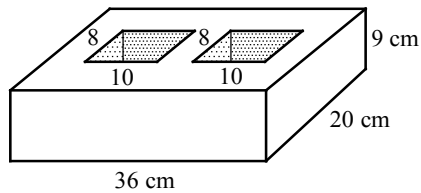


Exercises – Prisms

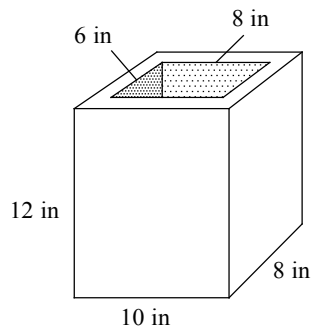
1



The figure above shows a cement block of $36\text{ cm} \times 20\text{ cm} \times 9\text{ cm}$ with two $10\text{ cm} \times 8\text{ cm}$ openings. What is the weight of the cement block to the nearest gram? (The density of cement is $1.7\text{ gram} / \text{cm}^3$)

- A) 5,040
- B) 6,048
- C) 7,560
- D) 8,568

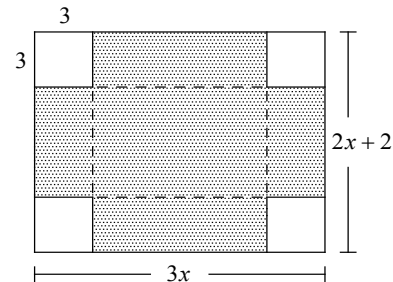
2



The figure above shows an aluminum block of $10\text{ in} \times 8\text{ in} \times 12\text{ in}$ with an $8\text{ in} \times 6\text{ in} \times 12\text{ in}$ opening. What is the weight of the aluminum block to the nearest pound? (The density of aluminum is 0.098 lb/in^3)

- A) 32
- B) 38
- C) 42
- D) 48

3



A manufacturing company produces cardboard boxes by cutting out square corners 3 inches (in) by 3 in. from rectangular pieces of cardboard $3x$ in. by $2x + 2$ in. The cardboard is then folded along the dashed lines to form a box without a top. If the volume of the box is 162 in^3 , what is the dimension of the original cardboard before cutting out its square corners?

- A) $12\text{ in} \times 9\text{ in}$
- B) $14\text{ in} \times 10\text{ in}$
- C) $15\text{ in} \times 12\text{ in}$
- D) $16\text{ in} \times 14\text{ in}$

4

An aquarium tank in the shape of a rectangular prism is 20 inches (in) long by 16 in wide by 12 in high. If 2,400 cubic inches of water is added into the empty tank, how far is the surface of the water from the top of the tank?