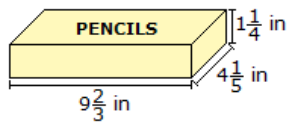# Study Island 6th Grade Geometry - Volume

**Question 1 .**

Candice bought a pencil box, shown below, to take with her to school.
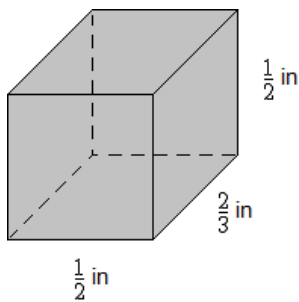


*Picture not drawn to scale

What is the volume of the pencil box?

- **A.** $40\frac{3}{5}$ cu in

- **B.** $101\frac{1}{2}$ cu in

- **C.** $50\frac{3}{4}$ cu in

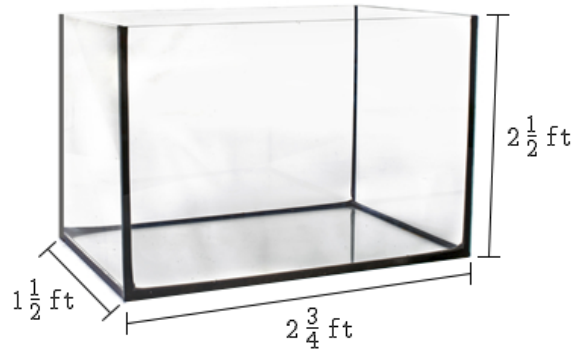- **D.** $15\frac{7}{60}$ cu in

**Question 2 .**



Note: Figure is not drawn to scale.

What is the volume of the rectangular prism?

- **A.** $\frac{2}{3}$ cu in

- **B.** $\frac{1}{2}$ cu in

- **C.** $\frac{1}{6}$ cu in

- **D.** $\frac{1}{3}$ cu in

**Question 3 .**

Betty purchased a fish tank. The length, width, and height of the fish tank are shown below.



$2\frac{1}{2}$ ft

$1\frac{1}{2}$ ft

$2\frac{3}{4}$ ft

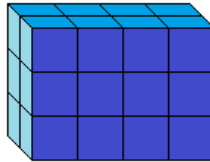*Picture not drawn to scale*

What is the volume of the fish tank?

- A.  $10\frac{5}{32}$ cu ft
- B.  $6\frac{3}{4}$ cu ft
- C.  $10\frac{5}{16}$ cu ft
- D.  $11\frac{5}{16}$ cu ft

**Question 4 .**

**Directions: Select all the correct answers.**

The prism below is made of cubes which measure $\frac{1}{6}$ of a centimeter on one side.
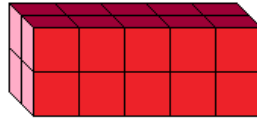


Which of the following represents the volume of the prism?

- ☐  $\frac{1}{216}$ cubic cm × 24
- ☐  $\left(4 \times \frac{1}{6}\,cm\right) + \left(2 \times \frac{1}{6}\,cm\right) + \left(3 \times \frac{1}{6}\,cm\right)$
- ☐  $\left(4 \times \frac{1}{6}\,cm\right) \times \left(2 \times \frac{1}{6}\,cm\right) \times \left(3 \times \frac{1}{6}\,cm\right)$
- ☐  $\frac{4}{3}$ cubic cm
- ☐  $\frac{3}{2}$ cubic cm
- ☐  $\frac{1}{9}$ cubic cm
- ☐  $\frac{1}{18}$ cubic cm × 24

**Question 5 .**

The prism below is made of cubes which measure $\frac{1}{4}$ of a centimeter on one side. What is the volume?
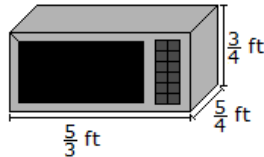


*Note: Figure is not drawn to scale.*

- A. 5 cubic cm
- B. $\frac{9}{4}$ cubic cm
- C. $\frac{5}{16}$ cubic cm
- D. 20 cubic cm

**Question 6 .**

Hannah measured the length, width, and height of her microwave in order to determine if it would fit in the space above her stove. Her measurements are shown below.
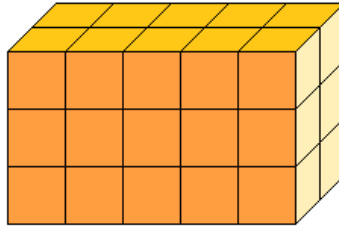


$\frac{3}{4}$ ft
$\frac{5}{4}$ ft
$\frac{5}{3}$ ft

*Picture not drawn to scale*

What is the volume of the microwave?

- A. $1\frac{3}{4}$ cu ft
- B. $2\frac{11}{12}$ cu ft
- C. $3\frac{2}{3}$ cu ft
- D. $1\frac{9}{16}$ cu ft

**Question 7 .**

The prism below is made of cubes which measure $\frac{1}{5}$ of an inch on one side. What is the volume of the prism?
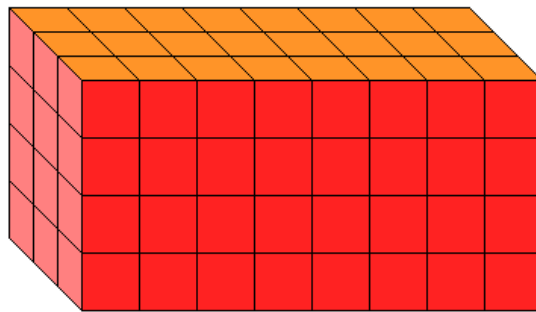
*Note: Figure is not drawn to scale.*

○ **A.** $3$ cu in

○ **B.** $\frac{12}{25}$ cu in

○ **C.** $\frac{25}{6}$ cu in

○ **D.** $\frac{6}{25}$ cu in

**Question 8 .**

The prism below is made of cubes which measure $\frac{1}{2}$ of a foot on one side. What is the volume of the prism?
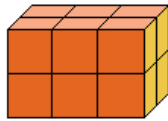
*Note: Figure is not drawn to scale.*

○ **A.** 16 cu ft

○ **B.** 48 cu ft

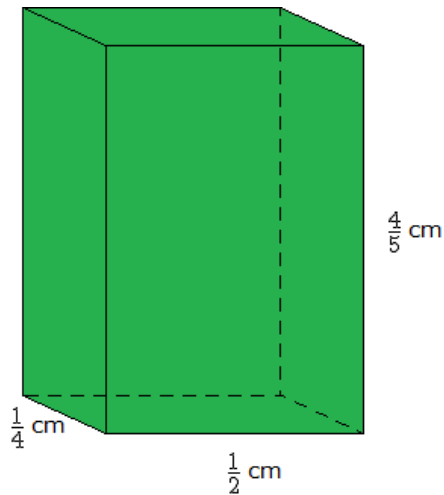○ **C.** 18 cu ft

○ **D.** 12 cu ft

**Question 9 .**

The prism below is made of cubes which measure $\frac{1}{4}$ of an inch on one side. What is the volume?



*Note: Figure is not drawn to scale.*

○ **A.** $\frac{7}{4}$ cubic in

○ **B.** 3 cubic in

○ **C.** $\frac{3}{16}$ cubic in

○ **D.** 12 cubic in

**Question 10 .**



$\frac{4}{5}$ cm

$\frac{1}{4}$ cm

$\frac{1}{2}$ cm

*Note: Figure is not drawn to scale.*

What is the volume of the rectangular prism?

○ **A.** $\frac{1}{5}$ cu cm

○ **B.** $\frac{2}{5}$ cu cm

○ **C.** $\frac{1}{8}$ cu cm

○ **D.** $\frac{1}{10}$ cu cm