Level 1: Measurement and Data Posttest

Question 1:

Kendall is a pipe fitter. She uses a tool to cut pieces of pipe. The tool will cut pipe that is equal to or greater than $\frac{1}{3}$ of a foot in length.

Which of the pipes below could have been cut with Kendall's tool?
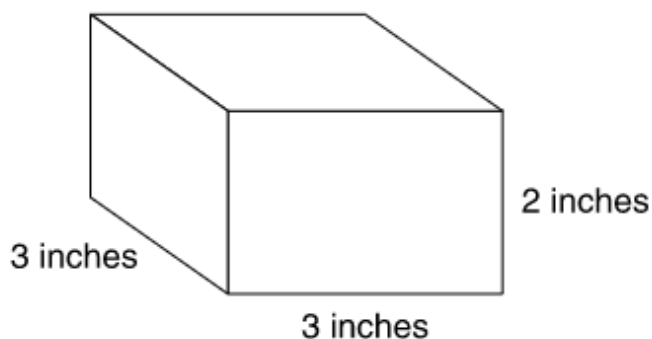
1" L

3" M

4" N

5" O

(Select all that apply.)

  a.   L

  b.   M

  c.   N

  d.   O

Question 2:

This figure is a rectangular prism.

2 inches

3 inches

3 inches

What is the volume, in cubic inches, of the prism?

a. 8 in^3

b. 9 in^3

c. 11 in^3

d. 18 in^3

Question 3:

The diagram shows a rectangular freezer.

A grocery uses the freezer for square containers of frozen meat. Each container is equal to 1 unit cube. The bottom of the freezer holds 20 containers. Six layers of containers fill the freezer.

What is the volume of the freezer, in cubic units?

	cubic units

Question 4:

A camp counselor needs 12 pieces of rope that are each $3\frac{1}{2}$ <u>feet</u> long.

How many <u>yards</u> of rope does the camp counselor need?

a. 14 yd

b. 39 yd

c. 42 yd

d. 126 yd

Question 5:

Madison made $1\frac{1}{2}$ gallons of punch. She used

- 2 pints of lemonade and
- 3 quarts of ginger ale.

The rest of the punch was orange juice.

How many quarts of orange juice did Madison use?

a. 2 qt

b. $2\frac{1}{2}$ qt

c. 8 qt

d. $8\frac{1}{2}$ qt

Question 6:

Sharon walked 5000 meters to raise money for a charity.

How far, in kilometers, did she walk?

kilometers

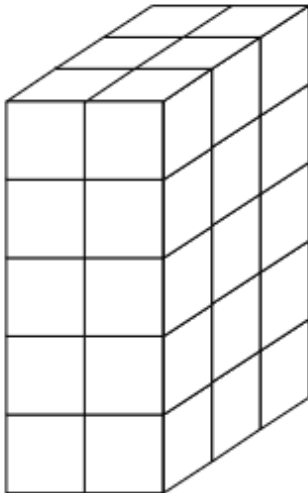*Continue* ➡

Question 7:

A fish tank at an aquarium is in the shape of a rectangular prism. It is 12 feet long, 15 feet wide, and 10 feet deep.

What is the volume, in cubic feet, of the tank?

	cubic feet

Question 8:

This rectangular prism was made by stacking cubes with edges that are each 1 inch long.

What is the volume, in cubic inches, of the prism?
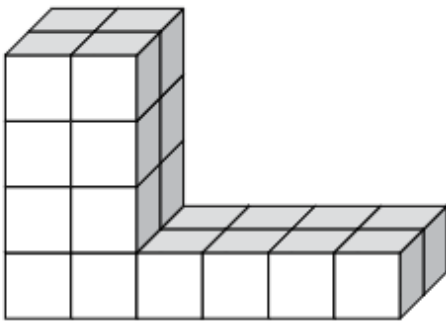
	cubic inches

Question 9:

The volume of a box is 72 cubic inches. The area of the bottom of the box is 18 square inches.

What is the height of the box, in inches?

   a. 54 in

   b. 27 in

   c. 8 in

   d. 4 in

Question 10:

Ken made this figure with blocks.

Each block is a cube with a side length of 1 centimeter.

What is the volume of the figure?

   a. 12 cubic centimeters

   b. 24 cubic centimeters

   c. 32 cubic centimeters

   d. 48 cubic centimeters

Continue ➡

Question 11:

A container is in the shape of a rectangular prism. The base of the container has an area of 60 square inches. When 180 cubic inches of water is poured into the container, the water level is 2 inches from the top of the container.

What is the volume of the container?

    a.   120 cubic inches

    b.   180 cubic inches

    c.   240 cubic inches

    d.   300 cubic inches

Question 12:

A rectangular prism is sitting on its base as shown.
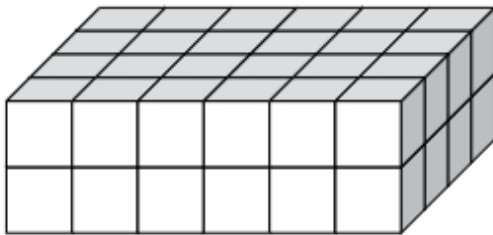
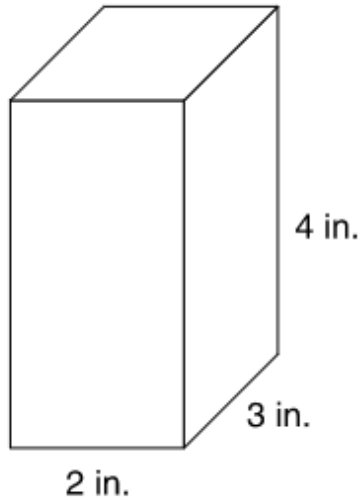The volume of each unit cube is 1 cubic inch.

What is the area of the base of the prism?

    a.   8 in^2

    b.   12 in^2

    c.   24 in^2

    d.   48 in^2

Question 13:

Kyle multiplies 2 × 3 × 4 to find the volume of this rectangular prism.
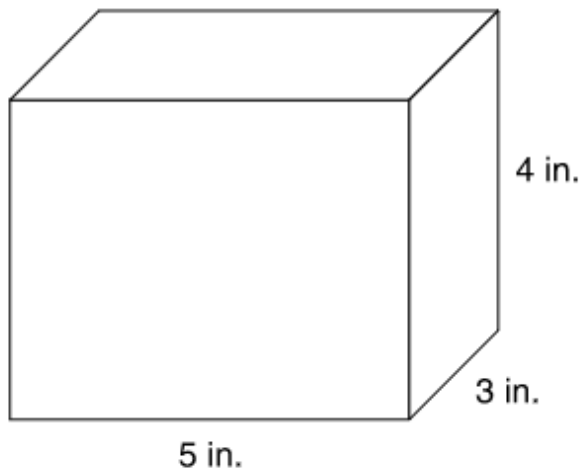

4 in.

3 in.

2 in.

Which is **not** another way to find the volume?

a. (3 × 4) + (3 × 4)

b. (2 × 4) + (2 × 4) + (2 × 4)

c. (2 × 3) + (2 × 3) + (2 × 3)

d. (2 × 3) + (2 × 3) + (2 × 3) + (2 × 3)

Question 14:

Jim has a box where he keeps his wooden blocks. The box is a rectangular prism.

4 in.

3 in.

5 in.

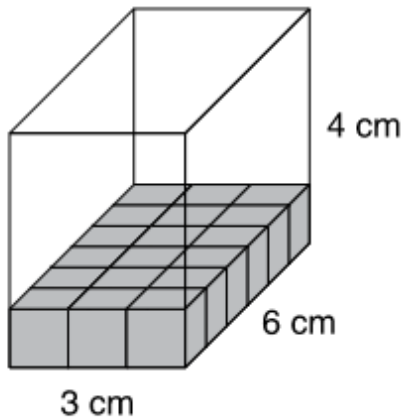Each block is a cube with an edge length of 1 inch.

What is the greatest number of blocks that can fit in the box?

a. 27

b. 35

c. 60

d. 82

Question 15:

Anthony fills the bottom layer of a rectangular prism with cubes. Each cube has an edge length of 1 centimeter.

Which of these will give Anthony the volume of the prism?

a.   counting the cubes and multiplying that number by 3

b.   counting the cubes and multiplying that number by 4

c.   counting the cubes and multiplying that number by 3 × 6

d.   counting the cubes and multiplying that number by 4 × 6

Question 16:

A railroad car shaped like a rectangular prism is 20 feet long, 8 feet wide, and 9 feet high. What is the volume of the railroad car?

a.   160 cubic feet

b.   340 cubic feet

c.   1,280 cubic feet

d.   1,440 cubic feet

Continue ➡

Question 17:

A room shaped like a rectangular prism has a volume of 1440 cubic feet. The height of the room is 8 feet.

Which could be the dimensions of the floor?

a.   15 feet by 12 feet

b.   20 feet by 72 feet

c.   50 feet by 40 feet

d.   90 feet by 90 feet

Question 18:

A sandbox shaped like a rectangular prism is 4 feet long, 3 feet wide, and 2 feet high. Jason puts 6 cubic feet of sand in the sandbox.

What is the volume of the part of the sandbox that does **not** have sand?

a.   3 cubic feet

b.   4 cubic feet

c.   18 cubic feet

d.   24 cubic feet

Question 19:

A swimming pool shaped like a rectangular prism is 3 meters deep. The volume of the pool is 600 cubic meters.

Which could **not** be the measurements of the base of the pool?
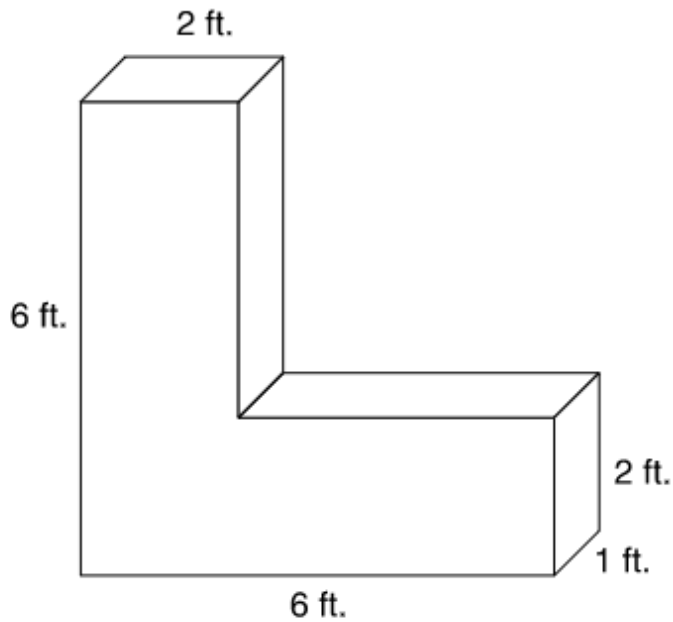
a.   5 meters by 40 meters

b.   8 meters by 25 meters

c.   10 meters by 20 meters

d.   12 meters by 30 meters

Question 20:

This figure is formed by two rectangular prisms.
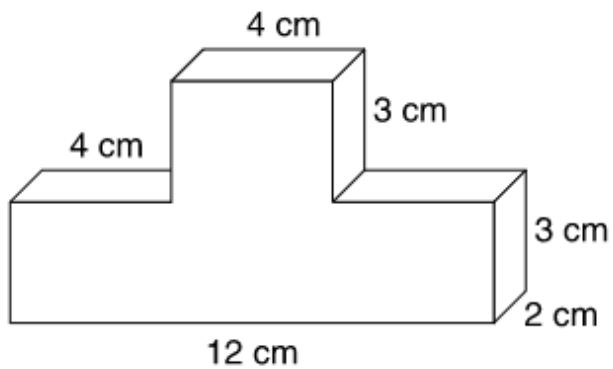

What is the volume of the figure?

    a.   17 cubic feet

    b.   20 cubic feet

    c.   24 cubic feet

    d.   32 cubic feet

Question 21:

This figure is formed by two rectangular prisms.
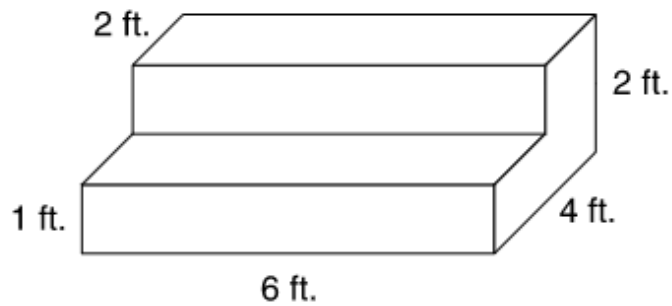

What is the volume of the figure?

a. 28 cubic centimeters

b. 84 cubic centimeters

c. 96 cubic centimeters

d. 120 cubic centimeters

Francis is making cement steps in the shape of rectangular prisms.

How much cement is needed to make the steps?

a.   15 cubic feet

b.   36 cubic feet

c.   48 cubic feet

d.   60 cubic feet