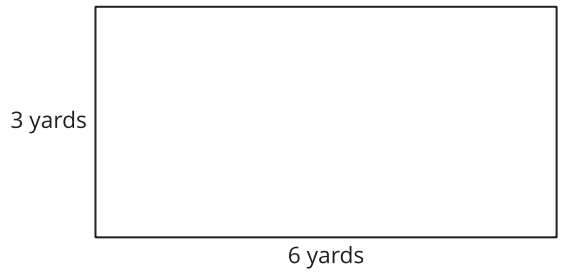
Section A: Practice Problems

1. **Pre-unit**

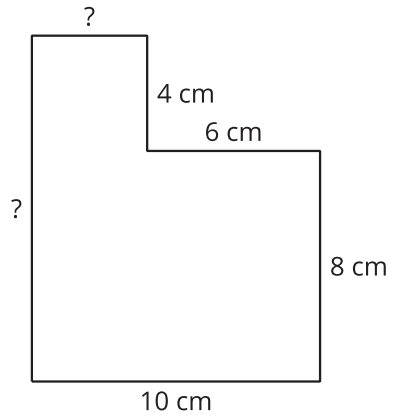
Here is a diagram of the floor in a room.



What is the area of the floor? Explain or show your reasoning.

2. **Pre-unit**

What are the missing side lengths? Explain or show your reasoning.



3. **Pre-unit**

Which of these units would you use to measure the length of a pencil? Select **all** that apply.

A. centimeter

B. meter

C. kilometer

D. inch

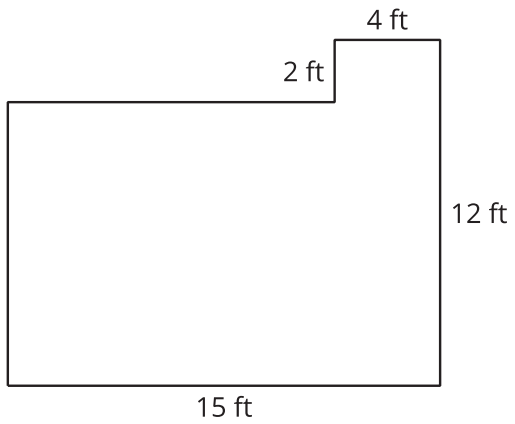
E. foot

F. yard

G. mile

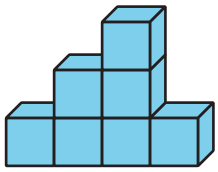
4. **Pre-unit**

Find the area of the figure shown here. Explain or show your reasoning.

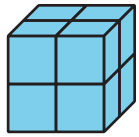


5. Which has greater volume? Explain or show your reasoning.

A

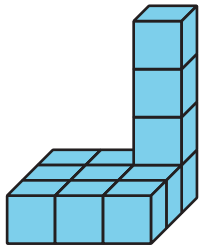


B



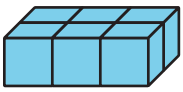
(From Unit 1, Lesson 1.)

6. What is the volume of the figure? Explain or show your reasoning.

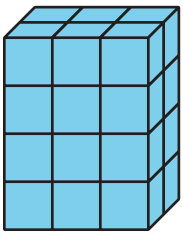


(From Unit 1, Lesson 2.)

7. a. What is the volume of this rectangular prism? Explain or show your reasoning.



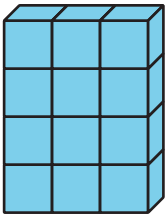
b. What is the volume of this rectangular prism? Explain or show your reasoning.



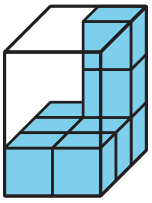
(From Unit 1, Lesson 3.)

8. Find the volume of each rectangular prism. Explain or show your reasoning.

a.



b.



(From Unit 1, Lesson 4.)

9. **Exploration**

Find some objects around you and compare their volume.

a. List the objects.

b. Which has the least volume? Which has the greatest?

c. Pick two of your objects and compare their volume.

10. **Exploration**

a. How many different rectangular prisms can you make with 18 cubes? Explain or show your reasoning.

b. How many different rectangular prisms can you make with 24 cubes? Explain or show your reasoning.

c. How do the side lengths of each prism compare to one another? What patterns do you notice? Is this pattern true for the rectangular prisms you can make with 36 cubes?