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Name _____ Date _____

For problems 1–3, fill in the blanks.

1. A unit cube takes up _____ cubic unit of space.

2. A _____ cube takes up 1 cubic centimeter of space.

3. An inch cube takes up 1 cubic _____ of space.

For problems 4–7, circle the measurement with the greater volume.

4. 1 cubic foot or 1 cubic inch

5. 1 cubic inch or 1 cubic centimeter

6. 1 cubic centimeter or 1 cubic foot

7. 1 cubic foot or 13 cubic inches

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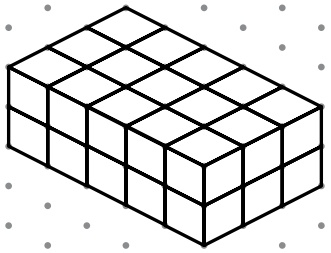
8. Sana says a right rectangular prism with a volume of 10 cubic inches takes up the same amount of space as a right rectangular prism with a volume of 10 cubic centimeters because both volumes are 10 cubic units. Do you agree or disagree with Sana? Why?

9. The picture represents a right rectangular prism packed with centimeter cubes. Use the prism to complete parts (a) and (b).



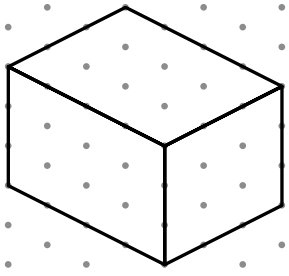
a. How many centimeter cubes are packed in the right rectangular prism?

b. Complete the table.

Length (centimeters)	Width (centimeters)	Height (centimeters)	Volume (cubic centimeters)

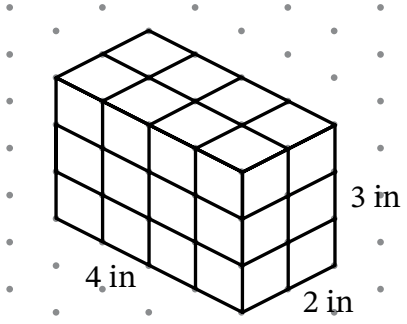
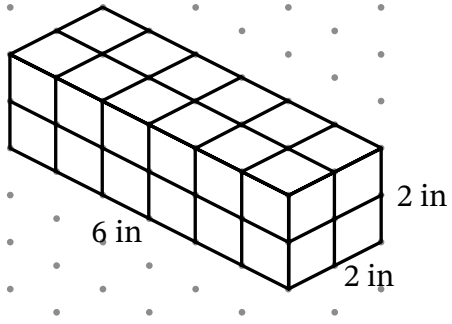
10. A right rectangular prism is 4 units long, 3 units wide, and 3 units tall. It is packed with unit cubes.

a. Sketch to show the number of unit cubes visible on the faces of the right rectangular prism.



b. How many unit cubes does it take to pack the prism?

11. Use right rectangular prism A and right rectangular prism B to complete parts (a)–(c).

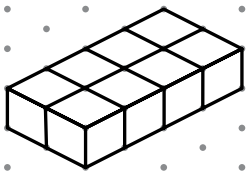
Right Rectangular Prism *A*	**Right Rectangular Prism *B***
	

a. What is the volume of right rectangular prism A?

b. What is the volume of right rectangular prism B?

c. Which prism takes up more space? How do you know?

12. Use the right rectangular prism shown to determine whether the statements are true or false.



Statement	**True**	**False**
Doubling the length of the prism doubles the prism's volume.		
Doubling the width of the prism halves the prism's volume.		
Tripling the height of the prism triples the prism's volume.		