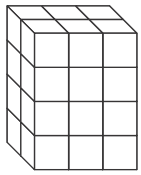
Name _____

Topic **11**
Assessment

1. Nabeel used unit cubes to make a rectangular prism. What is the volume of the prism? **1 point**

1 cube = 1 cubic unit



- (A) 24 cubic units
- (B) 12 cubic units
- (C) 8 cubic units
- (D) 6 cubic units

2. Select the possible dimensions for a prism with each given volume. **1 point**

	6 ft, 2 ft, 5 ft	4 ft, 7 ft, 1 ft	3 ft, 5 ft, 8 ft	4 ft, 4 ft, 9 ft
28 ft^3	☐	■	☐	☐
120 ft^3	☐	☐	■	☐
144 ft^3	☐	☐	☐	■
60 ft^3	■	☐	☐	☐

3. A. A storage shed is 9 feet wide, 15 feet long, and 11 feet tall. What is the volume of the shed? **1 point**

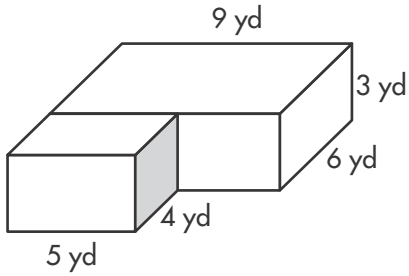
- (A) 35 cubic feet
- (B) 743 cubic feet
- (C) 1,485 cubic feet
- (D) 1,500 cubic feet

B. To weigh the shed down during a storm, a 1-foot layer of sand is added to the bottom of the shed. What is the volume of the sand? **1 point**

135 cubic feet

4. The living room in a new house has the dimensions shown.

A. Write an expression for the total volume of the room. **1 point**

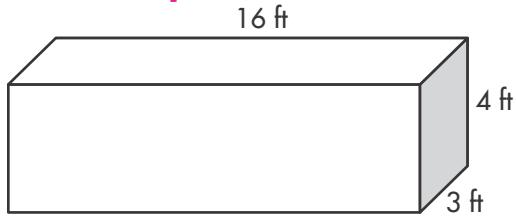


(9 × 6 × 3) + (5 × 4 × 3)

B. What is the volume of the room? **1 point**

222 cubic yards

5. A. Choose all the expressions that could **NOT** be used to find the volume of the box. **1 point**

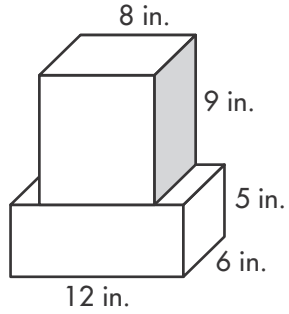


- ■ 7 × 16
- ☐ 16 × 4 × 3
- ☐ 12 × 16
- ☐ 3 × 64
- ■ 16 + 4 + 3

B. A similar box has the same dimensions except being only half as tall. What is the volume of the smaller box? **1 point**

96 ft^3

6. Kyle needs to fill the wooden platform he made to make it more stable. What is the volume of the platform? **1 point**



Ⓐ 46 cubic inches

Ⓑ 92 cubic inches

Ⓒ 529 cubic inches

Ⓓ 792 cubic inches

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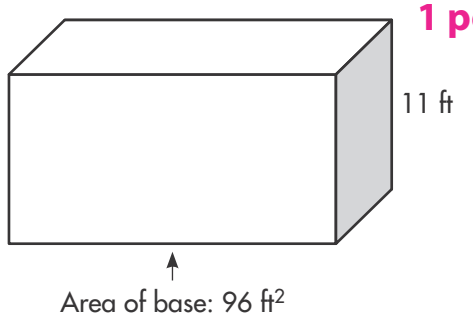
7. A. What is the volume of the room shown? **1 point**



1,056 cubic feet

B. Which equation was used to find the volume of the room? **1 point**

Ⓐ $V = \ell \times w$

Ⓑ $V = b \times h$

Ⓒ $V = \ell \times w \times h$

Ⓓ $V = b \times b \times h$

8. A brick wall will be shaped like a rectangular prism. The wall needs to be 3 feet tall, and the builders have enough bricks for the wall to have a volume of 330 cubic feet.

What does the area of the base of the wall need to be for the given volume and height? Give one pair of possible whole-number dimensions for the base. **2 points**

110 ft²; Possible answers: 1 ft × 110 ft, 2 ft × 55 ft, 5 ft × 22 ft, 10 ft × 11 ft

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9. One cereal box has a volume of 462 cubic inches. Another cereal box measures 12 inches tall, 8 inches long, and 3 inches wide. What is the combined volume of the two cereal boxes? **1 point**

750 cubic inches

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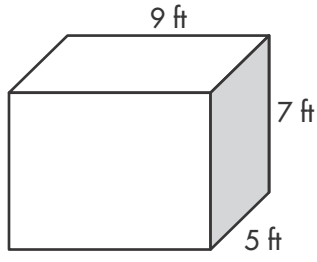
10. Select all the expressions that can be used to find the volume of the box in cubic feet. **1 point**



- [x] 35×9
- [ ] $(5 \times 7) + 9$
- [ ] 12×9
- [x] 45×7
- [x] $(9 \times 7) \times 5$

