

## Lesson 6: Expressions for Volume

- Let's write expressions for the volume of rectangular prisms.

### Warm-up: True or False: Parentheses or No Parentheses

Decide if each statement is true or false. Be prepared to explain your reasoning.

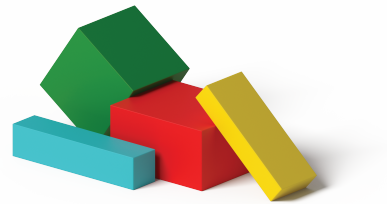
- $(4 \times 2) \times 5 = 4 \times (2 \times 5)$

- $(2 \times 5) \times 4 = 2 \times 20$

- $5 \times 4 \times 2 = 10 \times 40$

## 6.1: Card Sort: Match the Expression

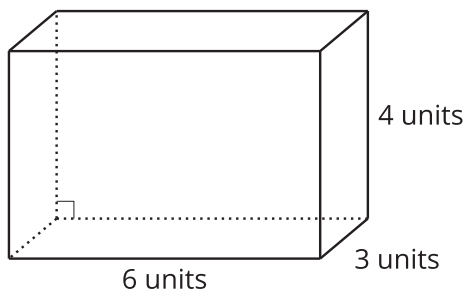
1. Match each rectangular prism with the expression(s) that represents its volume in cubic units. Be prepared to explain your reasoning.
2. For each prism write one additional expression, not in the card sort, that represents its volume in cubic units.



## 6.2: A Tale of Two Tables

1. Work with your partner to complete the tables. One partner completes Table 1 and the other completes Table 2.

**Prism A**



**Prism B**

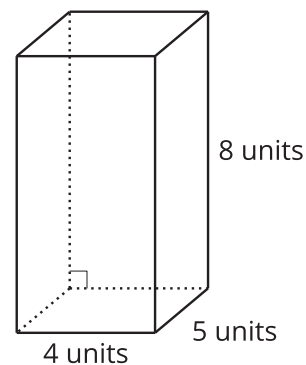


Table 1

	length (units)	width (units)	height (units)	volume (cubic units)
Prism A				
Prism B				

Table 2

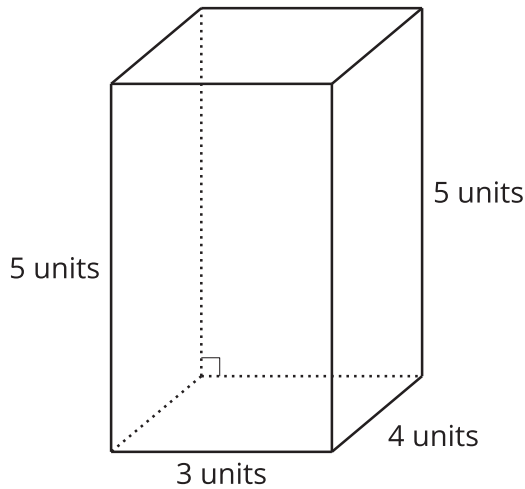
	area of the base (square units)	height (units)	volume (cubic units)
Prism A			
Prism B			

2. Compare your tables and discuss:
  - a. What do the tables have in common?
  - b. What is different about the tables?

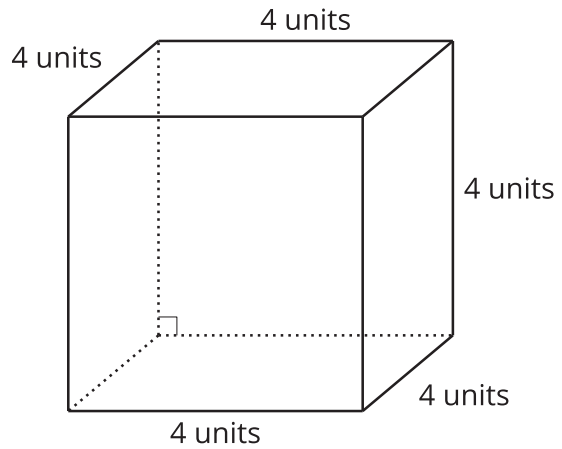
### 6.3: Two Truths and a Lie

Your teacher will assign you and your partner two prisms.

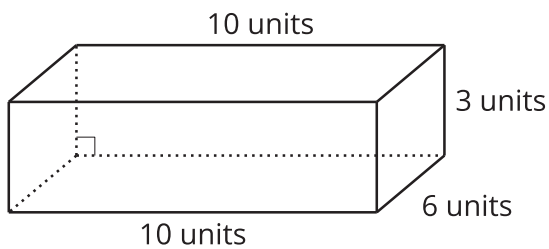
A



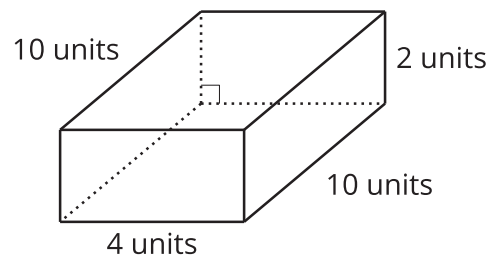
B



C



D



For each of your assigned prisms:

- Write 2 expressions to represent the volume in cubic units.
  
- Write 1 expression that does NOT represent the volume in cubic units.



Give your expressions to your partner:

1. For each prism, which expression does not represent its volume in cubic units? How do you know?

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2. What other expressions represent the volume of this prism in cubic units?