Avon Community School Corporation

Grade 5 Mathematics Unit 1 Report

Student Name: {{studentname}}

In this unit, students learned about adding and subtracting fractions. Below are the state standards addressed, and your child's current level of proficiency demonstrated:

Levels of Proficiency

Proficient	Basic	Below Basic	Not Assessed

Standards	Description	Performance
5.CA.1	Find whole-number quotients and remainders with up to four-digit dividends and two-digit divisors using strategies based on place value, the properties of operations, and/or the relationship between multiplication and division. Describe the strategy and explain the reasoning used.	{{5CA1}}
5.CA.2	Solve real-world problems involving multiplication and division of whole numbers (e.g., by using equations to represent the problem). In division problems that involve a remainder, explain how the remainder affects the solution to the problem.	{{5CA2}}
5.M.4	Find the volume of a right rectangular prism with whole-number side lengths by packing it with unit cubes and show that the volume is the same as would be found by multiplying the edge lengths or multiplying the height by the area of the base.	{{5M4}}

Shaded cells indicate standards for which proficiency is expected. Those not shaded will continue to be developed further this school year.

Assessment	Total Number of Points Student Earned
Unit 1 Multiplication & Volume Checkpoint	{{OverallMultVolCkpt}} out of **16**
Unit 1 Assessment	{{OverallUnitAssess}} out of **32** A score of 26-32 is 80% or higher and a proficient score

How can I help at home?

- Review the example of strategies and models used to develop these skills and concepts in this unit
- Visit www.mathlearningcenter.org for online resources. Here you can search for any skill you are wanting your child to work on.

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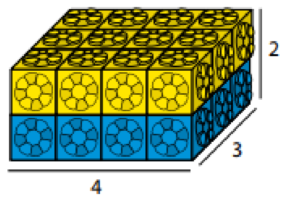
<table>
<tr><th>PROBLEM</th><th>COMMENTS</th></tr>
<tr><td>
Find the volume of this rectangular prism.



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When finding the volume of a rectangular prism, students often start by thinking about equal layers of cubes. In this example, they can see 2 layers (the height) with 12 cubes in each layer, for a total volume of 24 cubes, or cubic units.

While some students might recognize the formula for volume ($V = l \times w \times h$), it's not taught explicitly until later in the year.
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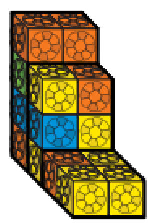
<tr><td>
Find the volume of this composite rectangular prism. Write an expression that shows the total volume.

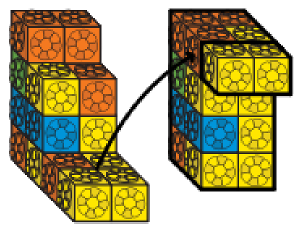


Working from back to front

$(2 \times 1) \times 4 +$

$(2 \times 1) \times 3 +$

$(2 \times 2) \times 1$



Imagine moving the $(2 \times 2) \times 1$ piece from the bottom layer to the top layer, making two rectangular prisms instead of three.

$(2 \times 2) \times 4 + (2 \times 1) \times 1$
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There are many ways to break apart a composite rectangular prism (a shape made up of rectangular prisms) and find its volume.

The expression for each composite rectangular prism shows the volumes of the separate rectangular prisms, adding those volumes together to find the total volume (18 cubic units).

The expression for each solution uses parentheses to identify the base of each rectangular prism. The parentheses are helpful but aren't mathematically necessary.
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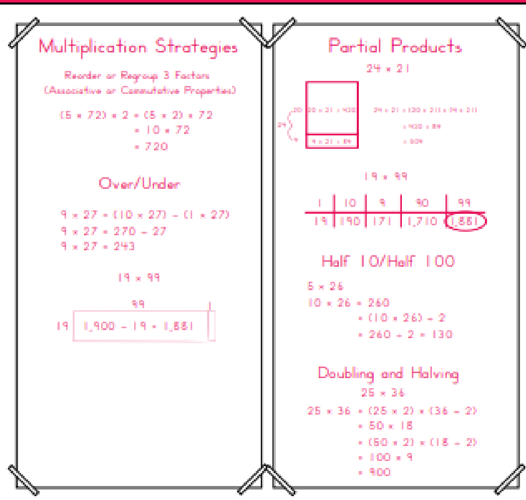

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The following strategies were developed in fourth grade and are extended and refined in fifth grade:

- partial products
- over/under
- half 10/half 100
- doubling and halving
- reorder or regroup three factors (using the associative and commutative properties)

Students work together to summarize these strategies and represent them using arrays, ratio tables, and equations. In class, students develop posters for their future reference.
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