## Unit 1 Lesson 4: Use Layers to Determine Volume

### WU Estimation Exploration: How Many Cubes? (Warm up)

#### Student Task Statement



About how many cubes were used to build this prism?

Record an estimate that is:

|  |  |  |
| --- | --- | --- |
| too low | about right | too high |
| $$ | $$ | $$ |

#### Activity Synthesis



### 1 Layers in Rectangular Prisms

#### Student Task Statement



1. Complete the table. Be prepared to explain your reasoning.

| * prism
 | * number of cubes in one layer
 | * number of layers
 | * volume
 |
| --- | --- | --- | --- |
| * A
 | * $$
 |  |  |
| * B
 | * $$
 |  |  |
| * C
 | * $$
 |  |  |
| * D
 | * $$
 |  |  |

* $$
* Prism A
* Prism B
* Prism C
* Prism D
1. Find the volume of each prism. Explain or show your reasoning.
* Prism E
* $$
* Prism F
1. How can you find the volume of any rectangular prism?

### 2 Finding Volume in Different Ways

#### Student Task Statement



1. Explain or show how the expression $5×24$ represents the volume of this rectangular prism.
2. Explain or show how the expression $6×20$ represents the volume of this rectangular prism.
3. Find a different way to calculate the volume of this rectangular prism. Explain or show your thinking.
4. Write an expression to represent the way you calculated the volume.



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