Lesson 15: Find Missing Side Lengths

Standards Alignments

Addressing   5.NBT.B.5, 5.NBT.B.6

Teacher-facing Learning Goals

- Solve problems involving area and volume using the relationship between multiplication and division.

Student-facing Learning Goals

- Let's use the relationship between multiplication and division to solve problems.

Lesson Purpose

The purpose of this lesson is for students to find missing side lengths of rectangles and rectangular prisms using their understanding of area, volume, and multi-digit division.

In an earlier unit, students learned to find the volume of rectangular prisms either by multiplying the length, width, and height or choosing a base and multiplying the area of that base by the corresponding height. In this unit, students learned to use division strategies to divide multi-digit numbers. The purpose of this lesson is to use multiplication and division to solve problems about area and volume. Throughout, students apply multiplication and division and what they know about the relationship between the length, width, and height of a rectangular prism and its volume to solve problems (MP2).

This lesson has a Student Section Summary.

Access for:

♿ Students with Disabilities

- Engagement (Activity 2)

🌐 English Learners

- MLR8 (Activity 2)

Instructional Routines

Estimation Exploration (Warm-up)

Lesson Timeline

Warm-up	10 min
Activity 1	15 min
Activity 2	20 min

Teacher Reflection Question

As you finish up this unit, reflect on the norms and activities that have supported each student in learning math. List ways you have seen each student grow as a young mathematician

Lesson Synthesis	10 min
Cool-down	5 min

throughout this work. List ways you have seen yourself grow as a teacher. What will you continue to do and what will you improve on in the next unit?

Cool-down (to be completed at the end of the lesson) 🕐 5 min

The Area of the Garden

Standards Alignments

Addressing   5.NBT.B.6

Student-facing Task Statement

The area of a rectangular garden is 832 square feet and its length is 16 feet. What is its width?

Student Responses

52 feet. Sample response:

$$
\begin{array}{r}
\boxed{52} \\
2 \\
10 \\
40 \\
16\,)\overline{832} \\
-640 \\
\hline
192 \\
-160 \\
\hline
32 \\
-\ 32 \\
\hline
0
\end{array}
$$