

STANDARDS FOR MATHEMATICAL PRACTICE (SMP)

The Standards for Mathematical Practice describe varieties of expertise that mathematics educators at all levels should seek to develop in their students. These practices rest on important “processes and proficiencies” with longstanding importance in mathematics education.

This section provides examples of learning experiences for this unit that support the development of the proficiencies described in the Standards for Mathematical Practice. The statements provided offer a few examples of connections between the Standards for Mathematical Practice and the Content Standards of this unit. The list is not exhaustive and will hopefully prompt further reflection and discussion.

1. **Make sense of problems and persevere in solving them.** Students make sense of problems involving multiplication and division.
2. **Reason abstractly and quantitatively.** Students demonstrate abstract reasoning by connecting arrays with multiplication problems.
3. **Construct viable arguments and critique the reasoning of others.** Students construct and critique arguments regarding mental math strategies focusing on multiplication and division.
4. **Model with mathematics.** Students are asked to use tiles to model various understandings of multiplication by creating arrays or groups. They record their thinking using words, pictures, and numbers to further explain their reasoning.
5. **Use appropriate tools strategically.** Students use graph paper to find all the possible rectangles for a given product.
6. **Attend to precision.** Students will learn to use terms such as multiply, divide, factor, and product with increasing precision.
7. **Look for and make use of structure.** Students use the distributive property of multiplication as a strategy to multiply.
8. **Look for and express regularity in repeated reasoning.** Students use the distributive property of multiplication to solve for products they do not know.

****Mathematical Practices 1 and 6 should be evident in EVERY lesson!***