

# Multiplying Fractions Logic Model

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**Title of the Module:** Multiplying Fractions

**Intended learners/audience:** Female trades pre-apprenticeship students

**Intended roles(s) learners are preparing for:** Entry level construction trades worker or apprentice

**Prerequisites:** none

**Revision date:** 11/7/15



Oregon Tradeswomen, Inc.

| Knowledge, Skills, & Attitudes   | Performance Tasks   | Objectives  | Intended Outcomes   |
|--|---|---|---|
| If learners begin the training with the prerequisites and learn this content ...   | ...and <i>demonstrate</i> their learning in these ways...   | ...we can be confident that they will be able to do these things <b>by the end of the training...</b>   | ...which will prepare them to do these things <b>after the training...</b>  |
| <p><b>Concepts</b></p> <ul style="list-style-type: none"> <li>• Multiplication</li> <li>• Improper fraction</li> <li>• Mixed number</li> <li>• Simplified fraction</li> </ul> <p><b>Principles</b></p> <ul style="list-style-type: none"> <li>• Multiplication of <math>a \times b = a</math> groups of <math>b</math></li> <li>• A fraction can be expressed in an infinite number of ways</li> </ul> <p><b>Procedures</b></p> <ul style="list-style-type: none"> <li>• Multiplication of a whole number and a fraction</li> <li>• Multiplication of two fractions</li> </ul> | <ul style="list-style-type: none"> <li>• Given a set of fractions and word problems involving fractions: <ul style="list-style-type: none"> <li>○ Multiply whole numbers and fractions</li> <li>○ Multiply two fractions</li> <li>○ Set up and solve word problems involving fractions</li> <li>○ Convert between improper fractions and mixed numbers</li> <li>○ Simplify fractions</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>A. Multiply fractions</li> <li>B. Simplify fractions</li> <li>C. Convert between improper fractions and mixed numbers</li> </ul> | <ul style="list-style-type: none"> <li>1. Calculate the amount of material needed to successfully complete construction projects</li> </ul> |



|   |                                 |                          |                                 |
|---|---------------------------------|--------------------------|---------------------------------|
| <ul style="list-style-type: none"> <li>• Converting an improper fraction to a mixed number</li> <li>• Converting a mixed number to an improper fraction</li> <li>• Simplifying a fraction</li> </ul> <p><b>Attitudes</b></p> <hr/> <ul style="list-style-type: none"> <li>• Grit</li> <li>• Growth mindset</li> <li>• Belief in the ability to reduce math anxiety</li> </ul> |                                 |                          |                                 |
| <p><b>Knowledge, Skills, &amp; Attitudes</b></p>  | <p><b>Performance Tasks</b></p> | <p><b>Objectives</b></p> | <p><b>Intended Outcomes</b></p> |

