

Working with Unit Fractions

This lesson was originally created by the AEAC team at NCIVS.

The goal of the lesson is for students to be able to calculate a fraction of a number.

Eg. Determine $\frac{7}{12}$ of 600

Traditionally to solve this question we would perform operations in the following order:

$$7 \times 600 / 12 = 350$$



The purpose of this lesson is to make this calculation make more sense to students. That will require us to change the order of our calculation and make use of unit fractions (a unit fraction is any fraction in which the numerator = 1).

First we should find $\frac{1}{12}$ of 600 $\Rightarrow 600/12 = 50$


Then since we want $\frac{7}{12} \Rightarrow 50 \times 7 = 350$

The start of this lesson allows students to familiarize themselves with the manipulatives (cubes).

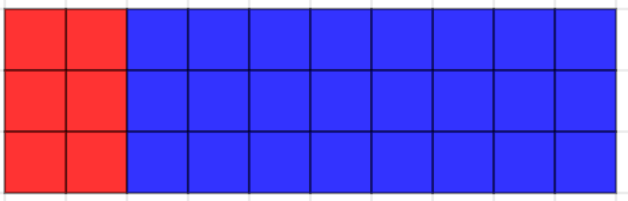
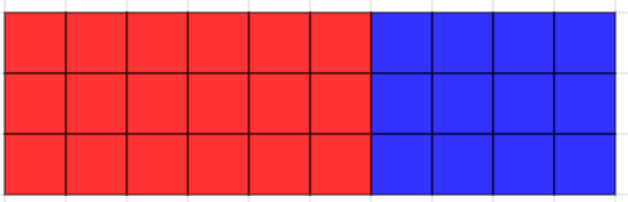
Note: there are multiple ways that they might choose to represent $\frac{1}{2}$ in the first slide.

Part-Part		Similar to 1 cup ketchup, 2 cups water for a recipe.
Part-Whole		Similar to 1 correct answer out of 2 questions.

When you get to the question that asks for $\frac{1}{2}$ of 12, it will be helpful to have a consensus in the class using the Part-Whole model.

ie. $\frac{1}{2}$ of 12 would look like:		And be equal to 6.
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When we see the questions: $\frac{1}{5}$ of 30, followed by $\frac{3}{5}$ of 30, we are making use of the unit fraction to figure out how many cubes of each colour we need.

$\frac{1}{5}$ of 30		$= 30/5 = 6$
$\frac{3}{5}$ of 30		$= 3 \times 6 = 18$

Going Forward

Note: We can make use of this method for understanding percents as well.

Eg. If we want to find 13% of \$22.00.

13% is the same as $13/100$

Find $1/100$ of \$22.00 = \$0.22

Then $13\% = 13 \times \$0.22 = \2.86

The Percent Trees Lesson would be a good follow up to this lesson.