

Dimensions Math

Grade 4 Letter Home #7

Chapter 7 Adding and Subtracting Fractions

Dimensions Math
Letters Home

Home Connection

In Chapter 7, your child will learn to add and subtract fractions with the same denominator, including mixed numbers. They will also add and subtract fractions in which one denominator is a multiple of the other denominator by finding a common denominator.

For example:

$$\frac{5}{6} + \frac{2}{3}$$

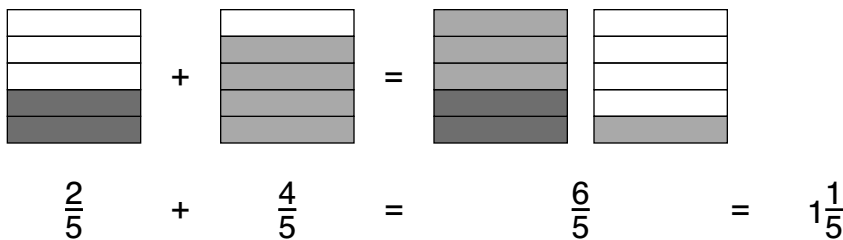
Since 6 is multiple of 3, we need only find an equivalent fraction for $\frac{2}{3}$ to add:

$$\frac{2}{3} = \frac{4}{6} \quad \frac{5}{6} + \frac{4}{6} = \frac{9}{6} = 1\frac{3}{6} = 1\frac{1}{2}$$

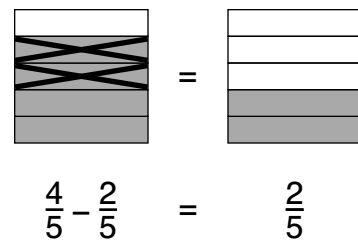
Answers are expected to be given in simplest form.

To begin, students will see that if both fractions have the same denominator, they can simply add or subtract:

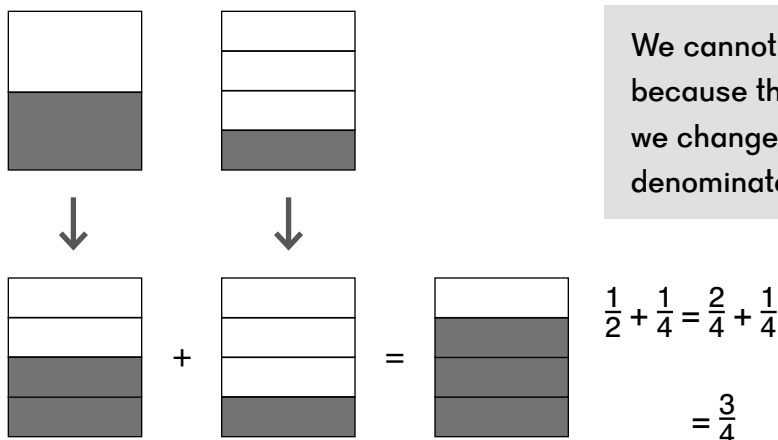
$$\frac{2}{5} + \frac{4}{5}$$



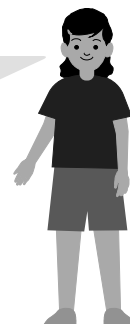
$$\frac{4}{5} - \frac{2}{5}$$



Next, students will learn that to add or subtract fractions, the fractions must be expressed in the same term, or have a common denominator.



We cannot add halves and fourths together because they are different-sized units. If we change them to fractions with the same denominators, the units will be the same size.



Next, your child will add and subtract mixed numbers:

$$2\frac{3}{5} + 1\frac{4}{5}$$

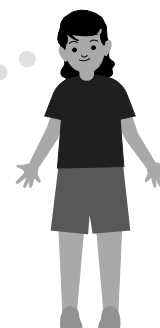
Add the whole number, then the fraction,



$$2\frac{3}{5} \xrightarrow{+1} 3\frac{3}{5} \xrightarrow{+\frac{4}{5}} 3\frac{7}{5}$$

Add the whole numbers first, then fractional parts.

$$2 + 1 + \frac{3}{5} + \frac{4}{5} = 3\frac{7}{5}$$



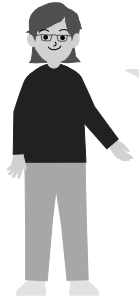
Either method may require students to simplify: $3\frac{7}{5} = 3 + 1 + \frac{2}{5} = 4\frac{2}{5}$

$\begin{array}{c} \frac{2}{5} \quad \frac{5}{5} \\ \quad \quad \quad \backslash \quad / \\ \quad \quad \quad 1 \end{array}$

Subtraction problems may require regrouping:

$$2\frac{1}{5} - \frac{4}{5}$$

$$1\frac{6}{5} - \frac{4}{5} = 1\frac{2}{5}$$



$\frac{4}{5}$ is greater than $\frac{1}{5}$. Express 1 as $\frac{5}{5}$.

$$2\frac{1}{5} = 1 + \frac{5}{5} + \frac{1}{5} = 1\frac{6}{5}$$

Finally, students will add or subtract mixed numbers with different denominators:

$$1\frac{1}{2} - \frac{5}{8} = 1\frac{4}{8} - \frac{5}{8}$$

$$= \frac{12}{8} - \frac{5}{8}$$

$$= \frac{7}{8}$$

What can we do at home?

This looks like an overwhelming amount of material; however, your child will learn and develop these concepts in lessons that layer concepts on top of what your child already knows. Encourage your child to persevere! Fractions are the foundation that future math is built on.