

ADDING AND SUBTRACTING FRACTIONS

Essential Question: How do you add and subtract fractions without a common denominator?

Add or subtract. Write answer in simplest form.

$$1) \frac{5 \cdot 3}{8 \cdot 3} + \frac{1 \cdot 4}{6 \cdot 4}$$

$$\frac{15}{24} + \frac{4}{24}$$

$$\frac{19}{24}$$

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

$$5 \frac{8}{12} + 2 \frac{3}{12}$$

$$7 \frac{11}{12}$$

$$2) \frac{15}{24} - \frac{7 \cdot 2}{12 \cdot 2}$$

$$\frac{15}{24} - \frac{14}{24}$$

$$\frac{1}{24}$$

$$6) 5 \frac{17}{5 \cdot 7} - 1 \frac{1 \cdot 5}{7 \cdot 5}$$

$$5 \frac{7}{35} - 1 \frac{5}{35}$$

$$4 \frac{2}{35}$$

$$3) \frac{3 \cdot 6}{5 \cdot 6} + \frac{5 \cdot 5}{6 \cdot 5}$$

$$\frac{18}{30} + \frac{25}{30}$$

$$\frac{43}{30} \text{ or } 1 \frac{13}{30}$$

$$7) 7 \frac{3 \cdot 7}{10 \cdot 3} + 3 \frac{2 \cdot 10}{3 \cdot 10}$$

$$7 \frac{9}{30} + 3 \frac{20}{30}$$

$$10 \frac{29}{30}$$

$$4) \frac{2 \cdot 8}{7 \cdot 8} - \frac{1 \cdot 7}{8 \cdot 7}$$

$$\frac{16}{56} - \frac{7}{56}$$

$$\frac{9}{56}$$

$$8) 8 \frac{5}{9} - 2 \frac{1 \cdot 3}{3 \cdot 3}$$

$$8 \frac{5}{9} - 2 \frac{3}{9}$$

$$6 \frac{2}{9}$$

On Your Own

$$1) 4 \frac{3 \cdot 5}{4 \cdot 5} - 2 \frac{3 \cdot 2}{10 \cdot 2}$$

$$4 \frac{15}{20} - 2 \frac{6}{20}$$

$$2 \frac{9}{20}$$

$$2) 6 \frac{3 \cdot 2}{25 \cdot 2} + 7 \frac{1 \cdot 25}{2 \cdot 25}$$

$$6 \frac{6}{50} + 7 \frac{25}{50}$$

$$13 \frac{31}{50}$$

A recipe calls for $\frac{1}{2}$ cup of chopped walnuts and $\frac{3}{5}$ cup of diced walnuts. In total how many cups of walnuts did the recipe call for?

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

$$\frac{5}{10} + \frac{6}{10} = \frac{11}{10}$$

The recipe calls for $1 \frac{1}{10}$ cups of walnuts.

You have $3 \frac{3}{4}$ pounds of taffy. You eat $1 \frac{1}{3}$ pound of taffy. How many pounds of taffy do you have left?

$$3 \frac{3 \cdot 3}{4 \cdot 3} - 1 \frac{1 \cdot 4}{3 \cdot 4}$$

$$3 \frac{9}{12} - 1 \frac{4}{12} = 2 \frac{5}{12}$$

You have $2 \frac{5}{12}$ pounds of taffy left.

STEPS FOR ADDING OR SUBTRACTING FRACTIONS WITH UNLIKE DENOMINATORS

- 1) Find the Least Common Denominator (LCD) or LCM.
- 2) Rewrite fractions as equivalent fractions by multiplying the numerator and denominator of each fraction by a number so that they have the LCM as their new denominator.
- 3) Add or subtract the numerators and keep the denominator the same. If there are whole numbers, add or subtract them.
- 4) Simplify the fractions, if necessary, by dividing the numerator and denominator by the GCF.