

Subtracting Fractions 2

Remember: **numerator** $\frac{2}{5}$ 2 = numerator
 denominator 5 5 = denominator

When subtracting fractions, if the **denominator** is the **different** for the fractions we must first find a **common denominator**. We do this by looking at the **multiples** of each **denominator**.

Example: $\frac{2}{5} - \frac{1}{7}$ Try setting the two fractions out underneath one another and find the **common multiple**

Step 1 $\frac{2}{5}$ multiples = 5, 10, 15, 20, 25, 30, 35, 40, 45, 50

 $\frac{1}{7}$ multiples = 7, 14, 21, 28, 35, 42, 49, 56, 63, 70

Since 35 is the **common multiple**, both denominators must be converted into 35ths! What **factor** must the **denominator** be multiplied by to make 35? Multiply the **numerator** by the same **factor**

$$\text{Step 2} \quad \frac{2}{5} \quad \times \quad 7 \quad = \quad \frac{14}{35}$$

$$\frac{1}{7} \quad \times \quad 5 \quad = \quad \frac{5}{35}$$

Now that the **denominators** are the same, we can subtract the fractions in the usual way. But remember to **simplify** the answer where possible! In this example no **simplification** is possible.

$$\text{Step 3} \quad \frac{14}{35} - \frac{5}{35} = \frac{9}{35}$$

Now try these using the same three steps: Remember to show each answer in its simplest form.

$$1. \quad \frac{4}{5} - \frac{1}{4} =$$

$$2. \quad \frac{2}{3} - \frac{1}{4} =$$

$$3. \quad \frac{7}{8} - \frac{1}{3} =$$

$$4. \quad \frac{5}{6} - \frac{2}{9} =$$

$$5. \quad \frac{4}{5} - \frac{6}{10} =$$

$$6. \quad \frac{6}{7} - \frac{4}{6} =$$

$$7. \quad \frac{5}{6} - \frac{3}{12} =$$

$$8. \quad \frac{7}{15} - \frac{3}{20} =$$

$$9. \quad \frac{5}{7} - \frac{1}{8} =$$

Now try these using the same three steps: Remember to show each answer in its simplest form.

$$1. \quad \frac{4}{5} - \frac{1}{4} = \frac{16}{20} - \frac{5}{20} = \frac{11}{20}$$

$$2. \quad \frac{2}{3} - \frac{1}{4} = \frac{8}{12} - \frac{3}{12} = \frac{5}{12}$$

$$3. \quad \frac{7}{8} - \frac{1}{3} = \frac{21}{24} - \frac{8}{24} = \frac{13}{24}$$

$$4. \quad \frac{5}{6} - \frac{2}{9} = \frac{15}{18} - \frac{4}{18} = \frac{11}{18}$$

$$5. \quad \frac{4}{5} - \frac{6}{10} = \frac{8}{10} - \frac{6}{10} = \frac{2}{10} \text{ simplest form} = \frac{1}{5}$$

$$6. \quad \frac{6}{7} - \frac{4}{6} = \frac{36}{42} - \frac{28}{42} = \frac{8}{42} \text{ simplest form} = \frac{4}{21}$$

$$7. \quad \frac{5}{6} - \frac{3}{12} = \frac{10}{12} - \frac{3}{12} = \frac{7}{12}$$

$$8. \quad \frac{7}{15} - \frac{3}{20} = \frac{28}{60} - \frac{9}{60} = \frac{19}{60}$$

$$9. \quad \frac{5}{7} - \frac{1}{8} = \frac{40}{56} - \frac{7}{56} = \frac{33}{56}$$