Subtraction of Mixed Numbers with Regrouping

To subtract mixed numbers, it may be necessary to regroup first. Write the whole number part as a mixed number. Add the mixed number and the fraction. Then subtract and simplify.

Find: $8\frac{7}{12} - 2\frac{3}{4}$

Write the fractions with like denominators. Compare the numerators.

$8\frac{7}{12} = 8\frac{7}{12}$
$-2\frac{3}{4} = 2\frac{9}{12}$

$\frac{9}{12}$ is greater than $\frac{7}{12}$. You can't subtract the fractions.

To regroup, write **8** as a mixed number.

$8 = 7\frac{12}{12}$

Add the mixed number and the fraction.

$8\frac{7}{12} = 7\frac{12}{12} + \frac{7}{12} = 7\frac{19}{12}$

Remember, $\frac{19}{12}$ is an improper fraction.

Now you can subtract and simplify.

$8\frac{7}{12} = 7\frac{19}{12}$
$-2\frac{9}{12} = 2\frac{9}{12}$
$5\frac{10}{12} = 5\frac{5}{6}$

Subtract. Simplify.

a

1. $8\frac{1}{5} = 7\frac{6}{5}$
$-2\frac{4}{5} = 2\frac{4}{5}$
$5\frac{2}{5}$

b

$7\frac{1}{4} = 6\frac{\square}{4}$
$-\frac{3}{4} = \frac{3}{4}$

c

$8\frac{7}{12} = 7\frac{\square}{12}$
$-4\frac{11}{12} = 4\frac{11}{12}$

2. $9\frac{3}{8}$
$-\frac{1}{2}$

$10\frac{1}{3}$
$-8\frac{2}{3}$

$7\frac{1}{5}$
$-4\frac{5}{8}$

3. $16\frac{1}{12}$
$-9\frac{11}{12}$

$12\frac{1}{10}$
$-\frac{1}{5}$

$16\frac{1}{2}$
$-8\frac{4}{9}$

Set up the problems. Then find the differences. Simplify.

a

4. $6\frac{3}{5} - 4\frac{9}{10} =$ _____
$6\frac{3}{5}$
$-4\frac{9}{10}$

b

$9\frac{1}{4} - 7\frac{3}{7} =$ _____

c

$15\frac{1}{3} - \frac{2}{3} =$ _____

LIVEWORKSHEETS