math Antics

Worksheets

Subtracting a Fraction from a Whole Number

Instructions: In the video lesson, we learned that you can subtract a fraction from a whole number if you "un-simplify" the whole number into the sum of a "whole fraction" and a whole number. Practice doing that with these problems.

1 $\quad 7 - \dfrac{2}{9}$

$= 6 + 1 - \dfrac{2}{9}$

$= 6 + \dfrac{9}{9} - \dfrac{2}{9}$

$= 6 + \dfrac{7}{9} = \boxed{6\dfrac{7}{9}}$

2 $\quad 10 - \dfrac{5}{7}$

$= 9 + 1 - \dfrac{5}{7}$

$= 9 + \dfrac{7}{7} - \dfrac{5}{7}$

$= 9 + \dfrac{2}{7} = \boxed{9\dfrac{2}{7}}$

3 $\quad 5 - \dfrac{1}{4}$

$= 4 + 1 - \dfrac{1}{4}$

$= 4 + \dfrac{4}{4} - \dfrac{1}{4}$

$= 4 + \dfrac{3}{4} = \boxed{4\dfrac{3}{4}}$

4 $\quad 3 - \dfrac{3}{10}$

$= 2 + 1 - \dfrac{3}{10}$

$= 2 + \dfrac{10}{10} - \dfrac{3}{10}$

$= 2 + \dfrac{7}{10} = \boxed{2\dfrac{7}{10}}$

5 $\quad 8 - \dfrac{3}{8}$

$= 7 + 1 - \dfrac{3}{8}$

$= 7 + \dfrac{8}{8} - \dfrac{3}{8}$

$= 7 + \dfrac{5}{8} = \boxed{7\dfrac{5}{8}}$

6 $\quad 12 - \dfrac{9}{15}$

$= 11 + 1 - \dfrac{9}{15}$

$= 11 + \dfrac{15}{15} - \dfrac{9}{15}$

$= 11 + \dfrac{6}{15} = \boxed{11\dfrac{6}{15}}$

7 $\quad 6 - \dfrac{2}{5}$

$= 5 + 1 - \dfrac{2}{5}$

$= 5 + \dfrac{5}{5} - \dfrac{2}{5}$

$= 5 + \dfrac{3}{5} = \boxed{5\dfrac{3}{5}}$

8 $\quad 11 - \dfrac{7}{12}$

$= 10 + 1 - \dfrac{7}{12}$

$= 10 + \dfrac{12}{12} - \dfrac{7}{12}$

$= 10 + \dfrac{5}{12} = \boxed{10\dfrac{5}{12}}$

9 $\quad 2 - \dfrac{5}{8}$

$= 1 + 1 - \dfrac{5}{8}$

$= 1 + \dfrac{8}{8} - \dfrac{5}{8}$

$= 1 + \dfrac{3}{8} = \boxed{1\dfrac{3}{8}}$

Subtracting BOTH parts of a Mixed Number

Instructions: When subtracting a mixed number, you need to remember that the two parts of the mixed number form a group and you need to subtract both parts. In these problems, use parentheses to help you do that just like you saw in the first example in the video lesson.

1 $10 - \left(1\frac{5}{12}\right)$

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

$= 9 - \frac{5}{12}$

$= 8 + 1 - \frac{5}{12}$

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

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

2 $7 - \left(4\frac{2}{3}\right)$

$= 7 - 4 - \frac{2}{3}$

$= 3 - \frac{2}{3}$

$= 2 + 1 - \frac{2}{3}$

$= 2 + \frac{3}{3} - \frac{2}{3}$

$= 2 + \frac{1}{3} = \boxed{2\frac{1}{3}}$

3 $8 - \left(4\frac{3}{8}\right)$

$= 8 - 4 - \frac{3}{8}$

$= 4 - \frac{3}{8}$

$= 3 + 1 - \frac{3}{8}$

$= 3 + \frac{8}{8} - \frac{3}{8}$

$= 3 + \frac{5}{8} = \boxed{3\frac{5}{8}}$

4 $9 - \left(8\frac{5}{12}\right)$

$= 9 - 8 - \frac{5}{12}$

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

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

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

5 $11 - \left(7\frac{1}{6}\right)$

$= 11 - 7 - \frac{1}{6}$

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

$= 3 + 1 - \frac{1}{6}$

$= 3 + \frac{6}{6} - \frac{1}{6}$

$= 3 + \frac{5}{6} = \boxed{3\frac{5}{6}}$

6 $5 - \left(2\frac{6}{7}\right)$

$= 5 - 2 - \frac{6}{7}$

$= 3 - \frac{6}{7}$

$= 2 + 1 - \frac{6}{7}$

$= 2 + \frac{7}{7} - \frac{6}{7}$

$= 2 + \frac{1}{7} = \boxed{2\frac{1}{7}}$

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Using Stacked Form to Subtract Mixed Numbers

Instructions: An even better way to remember to subtract both parts of a mixed number is to use "stacked form". Re-write these simple subtraction problems in stacked form to solve them. Be sure to put the number that is being taken away on the bottom.

1 $10\frac{5}{9} - 8\frac{2}{9}$

$$10\frac{5}{9}$$
$$-\ 8\frac{2}{9}$$
$$\overline{}$$
$$2\frac{3}{9} \text{ or } \boxed{2\frac{1}{3}}$$

2 $7\frac{7}{8} - 6\frac{2}{8}$

$$7\frac{7}{8}$$
$$-\ 6\frac{2}{8}$$
$$\overline{}$$
$$\boxed{1\frac{5}{8}}$$

3 $5\frac{2}{3} - 3\frac{1}{3}$

$$5\frac{2}{3}$$
$$-\ 3\frac{1}{3}$$
$$\overline{}$$
$$\boxed{2\frac{1}{3}}$$

4 $12\frac{3}{5} - 5\frac{1}{5}$

$$12\frac{3}{5}$$
$$-\ 5\frac{1}{5}$$
$$\overline{}$$
$$\boxed{7\frac{2}{5}}$$

5 $8\frac{9}{12} - 2\frac{5}{12}$

$$8\frac{9}{12}$$
$$-\ 2\frac{5}{12}$$
$$\overline{}$$
$$6\frac{4}{12} \text{ or } \boxed{6\frac{1}{3}}$$

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

$$4\frac{6}{7}$$
$$-\ 1\frac{3}{7}$$
$$\overline{}$$
$$\boxed{3\frac{3}{7}}$$

7 $25\frac{5}{6} - 10\frac{1}{6}$

$$25\frac{5}{6}$$
$$-\ 10\frac{1}{6}$$
$$\overline{}$$
$$15\frac{4}{6} \text{ or } \boxed{15\frac{2}{3}}$$

8 $6\frac{9}{10} - 4\frac{5}{10}$

$$6\frac{9}{10}$$
$$-\ 4\frac{5}{10}$$
$$\overline{}$$
$$2\frac{4}{10} \text{ or } \boxed{2\frac{2}{5}}$$

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"Borrowing" from the Whole Number Part

Instructions: When subtracting mixed numbers, sometimes you need to make the fraction part of the mixed number bigger by "borrowing" from the whole number part. This results in a mixed number that has an improper fraction, which is usually "bad form" as an answer, but can be helpful for subtracting. Convert each of these mixed numbers into one that has an "improper" fraction part.

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

2 $10\frac{1}{2} = 9 + 1 + \frac{1}{2}$
$= 9 + \frac{2}{2} + \frac{1}{2}$
$= 9 + \frac{3}{2} = \boxed{9\frac{3}{2}}$

3 $8\frac{2}{5} = 7 + 1 + \frac{2}{5}$
$= 7 + \frac{5}{5} + \frac{2}{5}$
$= 7 + \frac{7}{5} = \boxed{7\frac{7}{5}}$

4 $4\frac{1}{3} = 3 + 1 + \frac{1}{3}$
$= 3 + \frac{3}{3} + \frac{1}{3}$
$= 3 + \frac{4}{3} = \boxed{3\frac{4}{3}}$

5 $15\frac{3}{8} = 14 + 1 + \frac{3}{8}$
$= 14 + \frac{8}{8} + \frac{3}{8}$
$= 14 + \frac{11}{8} = \boxed{14\frac{11}{8}}$

6 $7\frac{3}{10} = 6 + 1 + \frac{3}{10}$
$= 6 + \frac{10}{10} + \frac{3}{10}$
$= 6 + \frac{13}{10} = \boxed{6\frac{13}{10}}$

7 $9\frac{1}{12} = 8 + 1 + \frac{1}{12}$
$= 8 + \frac{12}{12} + \frac{1}{12}$
$= 8 + \frac{13}{12} = \boxed{8\frac{13}{12}}$

8 $12\frac{3}{4} = 11 + 1 + \frac{3}{4}$
$= 11 + \frac{4}{4} + \frac{3}{4}$
$= 11 + \frac{7}{4} = \boxed{11\frac{7}{4}}$

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Math Antics Worksheets

Subtracting Mixed Numbers (with 'like' fractions) - Set 1

Instructions: Subtract these mixed numbers. If the top fraction is less than the bottom, you'll need to borrow from the whole number part.

1

$$8\frac{1}{5} \qquad 7+\frac{5}{5}+\frac{1}{5} \qquad 7\frac{6}{5}$$
$$-\ 2\frac{4}{5} \qquad -\ 2\frac{4}{5} \qquad -\ 2\frac{4}{5}$$
$$\boxed{5\frac{2}{5}}$$

2

$$4\frac{3}{8} \qquad 3+\frac{8}{8}+\frac{3}{8} \qquad 3\frac{11}{8}$$
$$-\ 1\frac{7}{8} \qquad -\ 1\frac{7}{8} \qquad -\ 1\frac{7}{8}$$
$$2\frac{4}{8}$$
or $\boxed{2\frac{1}{2}}$

3

$$7\frac{1}{10} \qquad 6+\frac{10}{10}+\frac{1}{10} \qquad 6\frac{11}{10}$$
$$-\ 5\frac{7}{10} \qquad -\ 5\frac{7}{10} \qquad -\ 5\frac{7}{10}$$
$$1\frac{4}{10}$$
or $\boxed{1\frac{2}{5}}$

4

$$9\frac{4}{5}$$
$$-\ 6\frac{3}{5}$$
$$\boxed{3\frac{1}{5}}$$

5

$$10\frac{3}{7} \qquad 9+\frac{7}{7}+\frac{3}{7} \qquad 9\frac{10}{7}$$
$$-\ 4\frac{4}{7} \qquad -\ 4\frac{4}{7} \qquad -\ 4\frac{4}{7}$$
$$\boxed{5\frac{6}{7}}$$

6

$$8\frac{3}{12} \qquad 7+\frac{12}{12}+\frac{3}{12} \qquad 7\frac{15}{12}$$
$$-\ 3\frac{7}{12} \qquad -\ 3\frac{7}{12} \qquad -\ 3\frac{7}{12}$$
$$4\frac{8}{12}$$
or $\boxed{4\frac{2}{3}}$

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Subtracting Mixed Numbers (with 'like' fractions) - Set 2

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Instructions: Subtract these mixed numbers. If the top fraction is less than the bottom, you'll need to borrow from the whole number part.

1

$$4\frac{1}{6} \qquad 3+\frac{6}{6}+\frac{1}{6} \qquad 3\frac{7}{6}$$
$$-\ 3\frac{5}{6} \qquad -\ 3\frac{5}{6} \qquad -\ 3\frac{5}{6}$$
$$0\frac{2}{6}$$
$$\text{or}\ \boxed{\frac{1}{3}}$$

2

$$6\frac{4}{9} \qquad 5+\frac{9}{9}+\frac{4}{9} \qquad 5\frac{13}{9}$$
$$-\ 4\frac{8}{9} \qquad -\ 4\frac{8}{9} \qquad -\ 4\frac{8}{9}$$
$$\boxed{1\frac{5}{9}}$$

3

$$20\frac{8}{9}$$
$$-\ 8\frac{7}{9}$$
$$\boxed{12\frac{1}{9}}$$

4

$$11\frac{2}{5} \qquad 10+\frac{5}{5}+\frac{2}{5} \qquad 10\frac{7}{5}$$
$$-\ 5\frac{4}{5} \qquad -\ 5\frac{4}{5} \qquad -\ 5\frac{4}{5}$$
$$\boxed{5\frac{3}{5}}$$

5

$$13\frac{1}{7} \qquad 12+\frac{7}{7}+\frac{1}{7} \qquad 12\frac{8}{7}$$
$$-\ 6\frac{2}{7} \qquad -\ 6\frac{2}{7} \qquad -\ 6\frac{2}{7}$$
$$\boxed{6\frac{6}{7}}$$

6

$$8\frac{1}{3} \qquad 7+\frac{3}{3}+\frac{1}{3} \qquad 7\frac{4}{3}$$
$$-\ 7\frac{2}{3} \qquad -\ 7\frac{2}{3} \qquad -\ 7\frac{2}{3}$$
$$0\frac{2}{3}$$
$$\text{or}\ \boxed{\frac{2}{3}}$$

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Subtracting Mixed Numbers (with 'un-like' fractions) - Set 1

Instructions: Subtract these mixed numbers. Start by changing the un-like fractions into 'like' fractions. Then, if the top fraction is less than the bottom fraction, you'll need to borrow from the whole number part in order to subtract.

1

$$10\frac{1}{2}\left(\frac{3}{3}\right) \qquad 10\frac{3}{6} \qquad 9+\frac{6}{6}+\frac{3}{6} \qquad 9\frac{9}{6}$$
$$-\ 7\frac{5}{6} \qquad\quad -\ 7\frac{5}{6} \qquad\quad -\ 7\frac{5}{6} \qquad\quad -\ 7\frac{5}{6}$$
$$\overline{} \qquad\quad \overline{} \qquad\quad \overline{} \qquad\quad \overline{}$$
$$2\frac{4}{6} \quad \text{or} \quad \boxed{2\frac{2}{3}}$$

2

$$9\frac{1}{4}\left(\frac{3}{3}\right) \qquad 9\frac{3}{12} \qquad 8+\frac{12}{12}+\frac{3}{12} \qquad 8\frac{15}{12}$$
$$-\ 3\frac{1}{3}\left(\frac{4}{4}\right) \qquad -\ 3\frac{4}{12} \qquad\quad -\ 3\frac{4}{12} \qquad\quad -\ 3\frac{4}{12}$$
$$\overline{} \qquad\quad \overline{} \qquad\quad \overline{} \qquad\quad \boxed{5\frac{11}{12}}$$

3

$$8\frac{1}{3}\left(\frac{7}{7}\right) \qquad 8\frac{7}{21}$$
$$-\ 5\frac{1}{7}\left(\frac{3}{3}\right) \qquad -\ 5\frac{3}{21}$$
$$\overline{} \qquad\quad \boxed{3\frac{4}{21}}$$

4

$$12\frac{5}{14} \qquad 12\frac{5}{14} \qquad 11+\frac{14}{14}+\frac{5}{14} \qquad 11\frac{19}{14}$$
$$-\ 6\frac{5}{7}\left(\frac{2}{2}\right) \qquad -\ 6\frac{10}{14} \qquad\quad -\ 6\frac{10}{14} \qquad\quad -\ 6\frac{10}{14}$$
$$\overline{} \qquad\quad \overline{} \qquad\quad \overline{} \qquad\quad \boxed{5\frac{9}{14}}$$

Subtracting Mixed Numbers (with 'un-like' fractions) - Set 2

Instructions: Subtract these mixed numbers. Start by changing the un-like fractions into 'like' fractions. Then, if the top fraction is less than the bottom fraction, you'll need to borrow from the whole number part in order to subtract.

1
$$8\frac{5}{6}\left(\frac{2}{2}\right) \qquad 8\frac{10}{12}$$
$$-\ 7\frac{3}{4}\left(\frac{3}{3}\right) \qquad -\ 7\frac{9}{12}$$
$$\boxed{1\frac{1}{12}}$$

2
$$15\frac{2}{9} \qquad 15\frac{2}{9} \qquad 14+\frac{9}{9}+\frac{2}{9} \qquad 14\frac{11}{9}$$
$$-\ 8\frac{2}{3}\left(\frac{3}{3}\right) \qquad -\ 8\frac{6}{9} \qquad -\ 8\frac{6}{9} \qquad -\ 8\frac{6}{9}$$
$$\boxed{6\frac{5}{9}}$$

3
$$11\frac{5}{6}\left(\frac{2}{2}\right) \qquad 11\frac{10}{12}$$
$$-\ 4\frac{7}{12} \qquad -\ 4\frac{7}{12}$$
$$7\frac{3}{12} \quad \text{or} \quad \boxed{7\frac{1}{4}}$$

4
$$9\frac{1}{4}\left(\frac{5}{5}\right) \qquad 9\frac{5}{20} \qquad 8+\frac{20}{20}+\frac{5}{20} \qquad 8\frac{25}{20}$$
$$-\ 7\frac{3}{10}\left(\frac{2}{2}\right) \qquad -\ 7\frac{6}{20} \qquad -\ 7\frac{6}{20} \qquad -\ 7\frac{6}{20}$$
$$\boxed{1\frac{19}{20}}$$