



## 1. Mixed Fractions to Improper Fractions

To convert a mixed fraction to a improper fraction:

1. Rewrite any negative symbols in front.
2. Multiply the denominator times the whole number and add this to the numerator; this becomes the new numerator.
3. Copy the old denominator.

### Examples

Convert the following mixed fractions to improper fractions

a)  $5\frac{3}{4}$

b)  $2\frac{4}{5}$

c)  $-3\frac{1}{7}$

d)  $-9\frac{2}{7}$

## 2. Simplifying Fractions

To simplify a fraction, divide both top and bottom by a common multiple.

### Examples

a)  $\frac{27}{36}$

b)  $\frac{12}{8}$

c)  $-\frac{42}{48}$

### 3. Adding/Subtracting Fractions

To add/subtract two fractions:

1. Rewrite each fraction with a common denominator
2. Add/subtract numerators
3. Copy denominator

#### Examples

a)  $\frac{2}{5} + \frac{1}{7}$

b)  $1\frac{3}{4} + \frac{2}{8}$

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

d)  $-\frac{2}{3} - \frac{7}{8}$

**An alternative method can be used by multiplying across.**

#### Examples

a)  $\frac{4}{6} - \frac{1}{2}$

b)  $\frac{1}{3} + \frac{7}{8}$

## Fraction Practice

**1. Convert the following mixed fractions to improper fractions.**

a)  $3\frac{5}{6}$

b)  $-6\frac{2}{3}$

c)  $1\frac{3}{7}$

**2. Simplify the following fractions.**

a)  $\frac{14}{35}$

b)  $-\frac{12}{18}$

c)  $\frac{320}{400}$

**3. Add/Subtract the fractions; reduce your answer if possible.**

a)  $\frac{2}{5} - \frac{1}{2}$

b)  $\frac{3}{7} + \frac{2}{3}$

c)  $-\frac{7}{6} - \frac{2}{5}$

d)  $\frac{3}{5} - \left(-\frac{2}{7}\right)$

e)  $\frac{2}{3} + \left(-\frac{1}{5}\right)$

f)  $\frac{1}{2} + 2\frac{1}{2}$

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

h)  $2 - \frac{3}{5}$

i)  $\frac{1}{3} + \frac{5}{6} - \frac{1}{2}$

Answers: 1a)  $\frac{23}{6}$  b)  $-\frac{20}{3}$  c)  $\frac{10}{7}$  2a)  $\frac{2}{5}$  b)  $-\frac{2}{3}$  c)  $\frac{4}{5}$

3a)  $-\frac{1}{10}$  b)  $\frac{23}{21}$  c)  $-\frac{47}{30}$  d)  $\frac{31}{35}$  e)  $\frac{7}{15}$  f) 3 g)  $\frac{11}{10}$  h)  $\frac{7}{5}$  i)  $\frac{2}{3}$