

Mixed Numbers and Improper Fraction Review

Mixed number: whole # with a fraction
 $1\frac{4}{5}$

Improper fraction: numerator of fraction is larger than the denominator

$$\frac{17}{4} \leftarrow \text{numerator}$$
$$4 \leftarrow \text{denominator}$$

How to convert mixed numbers into improper fractions:

$$1\frac{1}{5} = \frac{\text{denominator} \times \text{whole \#} + \text{numerator}}{\text{denominator}} = \frac{5 \times 1 + 1}{5} = \frac{6}{5}$$

same denominator as before

denominator \times whole # add the numerator

or



Draw and count shaded pieces
 $\frac{6}{5}$ shaded

$5 \leftarrow$ how many pieces make up one whole

or

$$\text{LCD} = \frac{1}{5} + \frac{1}{5} = \frac{6}{5}$$

$$\frac{1}{5} + \frac{1}{5} = \frac{2}{5}$$

How to convert from Improper fractions to mixed numbers

① $\frac{9}{4}$ ← dividend
 $\frac{9}{4}$ ← divisor

$4 \overline{) 9}$ ← whole #

$\frac{8}{1}$ ← numerator

2 $\frac{1}{4}$

① + ① + $\frac{1}{4}$ = $2 \frac{1}{4}$

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How to compare fractions:

- ① Make all numbers either mixed or improper fraction
- ② LCD = lowest common denominator
 ↳ lowest common factor of denominators

$\frac{5}{4}$ \square $1 \frac{2}{3}$

①

$\frac{5}{4} \times 3 = \frac{15}{12}$

$1 \frac{2}{3} = \frac{3}{1} + \frac{2}{3} = \frac{3 \times 4}{4} + \frac{2 \times 4}{4} = \frac{12}{4} + \frac{8}{4} = \frac{20}{4} = \frac{20}{12}$

$\frac{15}{12} < \frac{20}{12}$

$\frac{5}{4} < 1 \frac{2}{3}$

③ $3 \times 1 + 2 = 5$

$\frac{5}{4} \times 3 = \frac{15}{12}$

$\frac{2}{3} \times 4 = \frac{8}{12}$

$\frac{15}{12} < \frac{8}{12}$

$\frac{5}{4} < \frac{2}{3}$

③ $3 \times 1 + 2 = 5$

$\frac{5}{4} \times 3 = \frac{15}{12}$

$\frac{2}{3} \times 4 = \frac{8}{12}$

$\frac{15}{12} < \frac{8}{12}$

$\frac{5}{4} < \frac{2}{3}$