

# FRACTIONS

**FRACTION**: PART OF ONE WHOLE



$\frac{4}{10}$  — **NUMERATOR** — THE # OF PIECES I HAVE OR AM TALKING ABOUT.  
— **DENOMINATOR** — THE # OF PIECES IN 1 WHOLE

## 3 TYPES OF FRACTIONS

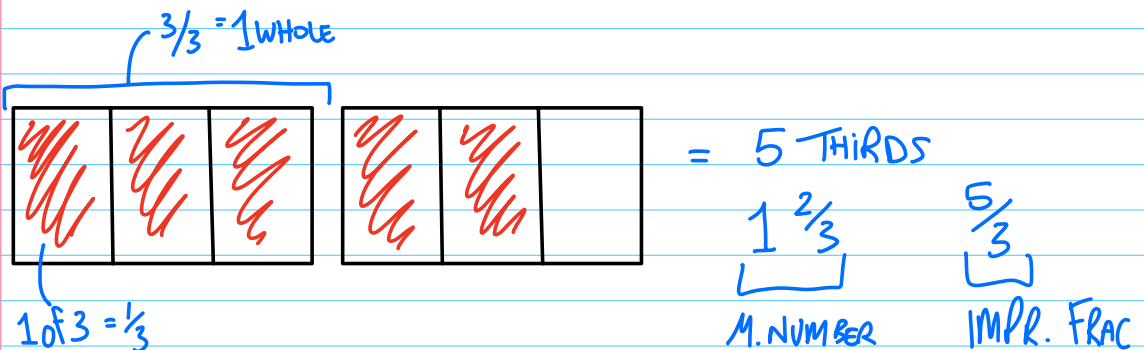
**PROPER FRACTION**: THE NUMERATOR IS LESS THAN DENOMINATOR  
VALUE =  $>$  1 WHOLE  
LESS

EX:  $\frac{3}{10}$   $\frac{1}{2}$   $\frac{3}{7}$

**IMPROPER FRACTION**: THE NUMERATOR IS GREATER THAN DENOMINATOR  
VALUE =  $<$  1 WHOLE  
GREATER

EX:  $\frac{3}{2}$   $\frac{10}{4}$   $\frac{7}{4}$

**MIXED NUMBER**: A COMBO OF A WHOLE NUMBER AND A PROPER FRACTION  
EX:  $2 \frac{3}{4}$   $1 \frac{1}{10}$



Mixed Number  $\rightarrow$  Improper Fraction

$$2 \frac{4}{5} \rightarrow \frac{(2 \times 5) + 4}{5} = \frac{10 + 4}{5} = \frac{14}{5}$$

Labels: WHOLE # x DENOMINATOR, PROPER FRACTION

$$3 \frac{1}{11} = \frac{(3 \times 11) + 1}{11} = \frac{34}{11}$$

Improper  $\rightarrow$  Mixed Number

$$\frac{11}{7} = 1 \frac{4}{7}$$

Labels: DIVIDE NUMERATOR BY DENOMINATOR, EXTRA SO..., THE REMAINDER = NUMERATOR

$$\frac{28}{5} = 5 \frac{3}{5}$$

Label: 5 GRPS of 5

## ADDING/SUBTRACTING FRACTIONS

$$\frac{1}{2} + \frac{3}{4} \rightarrow \frac{1}{2} \text{ CUP OF FLOUR} + \frac{3}{4} \text{ CUP OF FLOUR}$$

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

MAKE DENOMINATORS EQUAL/SAME

A COMMON DENOMINATOR

**+/- UNLIKE DENOMINATORS**  
THE STEPS

1. Find COMMON DENOMINATOR
2. +/- NUMERATOR
3. Find LOWEST TERM

EASIEST WAY TO MAKE COMMON DENOMINATOR IS MULTIPLY EACH FRACTION BY THE OTHER DENOMINATOR

$$3\frac{5}{6} + 1\frac{1}{4} = 3\frac{20}{24} + 1\frac{6}{24}$$

$$= (3+1) + \frac{20+6}{24}$$

$$= 4\frac{26}{24}$$

$$= 4 + \frac{24}{24} + \frac{2}{24}$$

$$= 5\frac{2}{24}$$

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

\* NUMERATOR CANNOT BE BIGGER THAN DENOMINATOR

CAN BE SIMPLIFIED.

$$4\frac{2}{5} - 3\frac{1}{2} = \frac{(4 \times 5) + 2}{5} - \frac{(3 \times 2) + 1}{2}$$

$$= \frac{22 \times 2}{5 \times 2} - \frac{7 \times 5}{2 \times 5}$$

$$= \frac{44}{10} - \frac{35}{10}$$

$$= \frac{9}{10}$$

$$\frac{5}{12} - \frac{1}{6} = \frac{5}{12} - \frac{2}{12}$$

$$= \frac{3}{12} \div 3 = \frac{1}{4}$$

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

x2 (instead of x12 ÷ x6) b/c it's EASIEST WAY TO MAKE DENOM. EQUAL

CORRECT BUT CAN BE SIMPLIFIED.