

Fraction Operations Reference Sheet

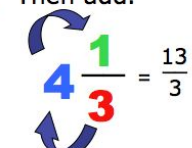
Operation	For fractions ($\frac{3}{4}$)	For Mixed Numbers ($3\frac{1}{2}$)	For Whole Numbers (3)
Adding/Subtracting	Must make common denominators using equivalent fractions. Only add/subtract the numerators.	Add and Subtract whole numbers as long as you have common denominators.	Regroup whole numbers as mixed numbers or improper fractions.
Multiplying	Multiply numerators by numerators and denominators by denominators	Must make mixed numbers improper. <i>CANNOT multiply whole numbers together.</i> Then, multiply the numerators and denominators.	Create whole numbers into fractions by using a 1 as the denominator. (3/1) Then, multiply the numerators and denominators.
Dividing	KEEP, CHANGE, FLIP <u>Keep</u> the first fraction, <u>change</u> the division sign to multiplication, then <u>flip</u> the 2nd numerator and denominator of the 2nd fraction.	Must make mixed numbers improper. Then, KEEP, CHANGE, FLIP. <i>CANNOT divide whole numbers and fractions.</i>	Create whole numbers into fractions by using a 1 as the denominator. (3/1). Then, KEEP, CHANGE, FLIP.

Making improper fractions:

Multiply the whole number by the denominator and add the numerator.

Keep the same denominator.

Then add.



$$4\frac{1}{3} = \frac{13}{3}$$

Multiply.