Fraction Operation Study Guide

Addition (SAL- goes hiking on a vertical cliff in her common demon boots)

* write the problem VERTICALLY (one number on top of the other)
* you CAN have whole numbers and mixed number in the problem BUT
* you **MUST find common denominators** in the fractions (use the ladder method)
* add the numerators of the fractions and keep the denominator the same
* add the whole numbers
* simplify the fraction part

Subtraction (SAL- goes hiking on a vertical cliff in her common demon boots)

* write the problem VERTICALLY (one number on top of the other)
* you CAN have whole numbers and mixed number in the problem BUT
* you **MUST find common denominators** in the fractions (use the ladder method)
* once you have common denominators, the top numerator must be bigger than the bottom numerator to allow you to subtract. If not, borrow 1 from the whole number on top and make a BIG MAMA (change the 1 that you borrow into the same fraction format as the fraction that you already have - like 8/8 if you already have ⅜ in the top fraction. Add them together to give you 11/8) Now you can go ahead and...
* subtract the numerators of the fractions and keep the denominator the same
* subtract the whole numbers
* simplify the fraction part

Multiplication (MAD DOG eats up whole and mixed numbers and poops out fractions on the horizontal ground)

* write problem horizontally across
* put a 1 under any whole number and make them fractions- 4 becomes 4/1
* change mixed numbers to improper fractions - multiply the denominator and the whole number and add the fraction. Put the answer on top of the original denominator) 2 ⅓ becomes 7/3
* once everything is in fraction format, you are ready. You do NOT need common denominators.
* cross simplify or simplify fractions before you multiply - this makes for less work later
* multiply the numerators
* multiply the denominators
* simplify fractions and change improper fractions to mixed number

Division (MAD DOG eats up whole and mixed numbers and poops out fractions on the horizontal ground)

* write problem horizontally across
* put a 1 under any whole number and make them fractions - 4 becomes 4/1
* change mixed numbers to improper fractions - multiply the denominator and the whole number and add the fraction. Put the answer on top of the original denominator) 2 ⅓ becomes 7/3
* once everything is in fraction format, you are ready. You do NOT need common denominators.
* we NEVER divide. Rewrite the problem. **Leave the first fraction exactly as it is. Change the division sign to multiplication. FLIP the SECOND fraction.**  Now follow the steps for multiplication.
* cross simplify or simplify fractions before you multiply - this makes for less work later
* multiply the numerators
* multiply the denominators
* simplify fractions and change improper fractions to mixed number