

Chapter 2 QUICK REFERENCE SHEET

∅ To find a number in between two numbers:

- 1) Rewrite both fractions so they have a common denominator.
- 2) Pick a number in between the two numerators.
- 3) Write the number picked as the numerator over the common denominator.
- 4) Reduce the fraction if necessary.

∅ To list numbers from least to greatest:

- 1) Rewrite all numbers as fractions with common denominators.
- 2) Order the fractions according to their numerators from least to greatest.
- 3) Write the original numbers in order in set notation.

∅ The absolute value of a number is the distance it is from zero on the number line.

ADDING AND SUBTRACTION TIPS:

∅ Only get a like denominator when adding or subtracting. Do NOT get the LCD when multiplying or dividing.

∅ To use the subtraction rule:

- 1) Leave the first number alone.
- 2) Change the minus sign to a plus sign.
- 3) Change the number following the operation to its opposite.

∅ You can't determine whether to add the numbers or to subtract the numbers unless you have an ADDITION problem. If you have a subtraction problem, use the subtraction rule to make it an addition problem so you can determine whether the signs are the same or different.

∅ If you have $(-9) + 8$ and you say you should add, you can't give an answer or -1 . Because if you added those two numbers you would get 17 ($9 + 8 = 17$) So if you are thinking $9 - 8 = 1$, that means you subtracted!!

∅ Never change an addition problem into a subtraction problem.

Example: Do not make $(-7) + (-14)$ into $(-7) - 14$!

∅ When adding or subtracting decimals, line up the decimals.

∅ The abbreviation for subtraction is SUBTR

MULTIPLICATION AND DIVISION TIPS:

- ∅ Only cancel when you are MULTIPLYING fractions!!
- ∅ To use the division rule:
 - 1) Leave the first number alone.
 - 2) Change the division sign to a multiplication sign.
 - 3) Change the number following the operation sign to its reciprocal.
- ∅ If you say "SAME" when multiplying or dividing, the result better be positive.
- ∅ If you say "DIFFERENT" when multiplying or dividing, the result better be negative.

PROPERTY TIPS:

- ∅ If you aren't adding zero to something, you don't have ADD ID PROP.
- ∅ If the two numbers you are adding aren't opposites, you don't have ADD INV PROP.
- ∅ If the sum isn't zero, you don't have ADD INV PROP.
- ∅ If you aren't multiplying one and a number, you don't have MULT ID PROP.
- ∅ If you aren't multiplying two reciprocals, you don't have MULT INV PROP.
- ∅ If the product isn't one, you don't have MULT INV PROP.
- ∅ If the product isn't zero, you don't have MULT PROP ZERO.
- ∅ If you multiply a number by -1 , it changes the sign of the number.

DETERMINING SETS:

- ∅ The letter that represents the set of Integers is Z .
- ∅ The letter that represents the set of Rational Numbers is Q .
- ∅ If a number is Irrational (I), it belongs to no other set.
- ∅ If a number is a Natural (N) number, it is also a Whole (W) number, an Integer (Z), as well as Rational (Q).
- ∅ If a number is a Whole (W) number, it is also an Integer (Z), as well as Rational (Q).
- ∅ Integers (Z) are also Rational (Q) numbers.