**Fractions & Mixed Numbers – Multiply**

1. **Convert** all numbers to **fractions**:
2. **Whole numbers have denominator of “1”.**
3. **Mixed numbers convert – whole × denominator + numerator = new numerator, keep denominator.**
4. Multiply numerator by numerator.
5. Multiply denominator by denominator.
6. Simplify if possible.

**Fractions & Mixed Numbers – Divide**

1. **Convert** all numbers to **fractions**:
2. **Whole numbers have denominator of “1”.**
3. **Mixed numbers convert – whole × denominator + numerator = new numerator, keep denominator.**
4. **KCF or Multiply by the Reciprocal!**
5. **Keep First Fraction**
6. **Change Sign to Multiply**
7. **Flip Second Fraction to Reciprocal**
8. Multiply numerator by numerator.
9. Multiply denominator by denominator.
10. Simplify if possible.

**Integer Rules for Multiplying and Dividing**

-

-

+

**Decimal – Divide**

**Divisor – No Decimal**

1. Decimal in dividend “pops” straight up into the quotient.
2. Divide normally.
3. There are NO REMAINDERS!
4. Continue dividing adding “magic zeros” in your dividend until:
5. The decimal terminates (stops)
6. The decimal repeats (use a bar notation)
7. You have gone one past the rounding position.

**Decimal – Divide**

**Divisor – WITH A DECIMAL!!**

1. Decimal in divisor moves **to the wall** – **count the spaces!**
2. Decimal in the **dividend moves** the same number of spaces **to the right. (You are multiplying through by a power of 10!)**
3. Decimal in dividend “pops” straight up into the quotient.
4. Divide normally.
5. There are NO REMAINDERS!
6. Continue dividing adding “magic zeros” in your dividend until:
7. The decimal terminates (stops)
8. The decimal repeats (use a bar notation)
9. You have gone one past the rounding position.

**Changing a Percent to a Decimal**

To change a percent to a decimal $÷$ by 100

**Changing a Decimal to a Percent**

To change a decimal to a percent × by 100

**Percent Proportion**

$$\frac{Part (is)}{Whole (of)}=\frac{Percent (\%)}{100}$$

**Simple Interest**

*I = prt*

(I= Interest, p= principal, r = rate, t = time)

**\*\*Remember** your rate can not be a percent (divide by 100)

**\*\*Remember** your time must be in years 🡪 If it is in months: $\frac{number of months}{12}$

**Percent of Change**

$$Percent of Change=\left(\frac{Final-Original}{Original}\right)×100$$

**\*\*Remember** a positive percent of change is an increase.

**\*\*Remember** a negative percent of change is a decrease.