

## Unit Conversions Dimensional Analysis (Factor-Label Method)

1. Start with original number and unit.
2. Multiply by a unit factor with the unit to be discarded on the bottom and the desired unit on top.
3. Cancel units.
4. Perform numerical calculations.

### Unit Factor –

1000 milligrams = 1 gram    &    1000 grams = 1 Kilogram

$$\frac{1000 \text{ milligrams}}{1 \text{ gram}} = 1 \quad \text{or} \quad \frac{1 \text{ gram}}{1000 \text{ milligrams}} = 1$$

$$\frac{1000 \text{ grams}}{1 \text{ Kilogram}} = 1 \quad \text{or} \quad \frac{1 \text{ Kilogram}}{1000 \text{ grams}} = 1$$



= 2000 milligrams or  $2 \times 10^3$  milligrams