MAT 099 More Metric Information – may NOT use on exams

## Length

Meter (m) is the base unit.

| | |
|---|---|
| 1 kilometer (km) = 1000 meters (m) | $1\text{ m} = \frac{1}{1000}\text{ km}$ (or 0.001 km) |
| 1 hectometer (hm) = 100 m | $1\text{ m} = \frac{1}{100}\text{ hm}$ (or 0.01 hm) |
| 1 dekameter (dam) = 10 m | $1\text{ m} = \frac{1}{10}\text{ dam}$ (or 0.1 dam) |
| $1\text{ decimeter (dm)} = \frac{1}{10}\text{ m}$ (or 0.1 m) | 1 m = 10 dm |
| $1\text{ centimeter (cm)} = \frac{1}{100}\text{ m}$ (or 0.01 m) | 1 m = 100 cm |
| $1\text{ millimeter (mm)} = \frac{1}{1000}\text{ m or (0.001 m)}$ | 1 m = 1000 mm |

## Mass

Gram (g) is the base unit.

| | |
|---|---|
| 1 kilogram (kg) = 1000 grams (g) | $1\text{ g} = \frac{1}{1000}\text{ kg}$ (or 0.001 kg) |
| 1 hectogram (hg) = 100 g | $1\text{ g} = \frac{1}{100}\text{ hg}$ (or 0.01 hg) |
| 1 dekagram (dag) = 10 g | $1\text{ g} = \frac{1}{10}\text{ dag}$ (or 0.1 dag) |
| $1\text{ decigram (dg)} = \frac{1}{10}\text{ g}$ (or 0.1 g) | 1 g = 10 dg |
| $1\text{ centigram (cg)} = \frac{1}{100}\text{ g}$ (or 0.01 g) | 1 g = 100 cg |
| $1\text{ milligram (mg)} = \frac{1}{1000}\text{ g or (0.001 g)}$ | 1 g = 1000 mg |

## Capacity

Liter (L) is the base unit.

| | |
|---|---|
| 1 kiloliter (kL) = 1000 liters (L) | $1\text{ L} = \frac{1}{1000}\text{ kL}$ (or 0.001 kL) |
| 1 hectoliter (hL) = 100 L | $1\text{ L} = \frac{1}{100}\text{ hL}$ (or 0.01 hL) |
| 1 dekaliter (daL) = 10 L | $1\text{ L} = \frac{1}{10}\text{ daL}$ (or 0.1 daL) |
| $1\text{ deciliter (dL)} = \frac{1}{10}\text{ L}$ (or 0.1 L) | 1 L = 10 dL |
| $1\text{ centiliter (cL)} = \frac{1}{100}\text{ L}$ (or 0.01 L) | 1 L = 100 cL |
| $1\text{ milliliter (mL)} = \frac{1}{1000}\text{ L or (0.001 L)}$ | 1 L = 1000 mL |