



Notes: Measurement

Subtopic: Metric Conversions

A. Table of Length and Distance Units - Metric:

10 millimeters [mm] = 1 centimeter [cm]

10 centimeters [cm] = 1 decimeter [dm]

10 decimeters [dm] = 1 meter [m]

10 meters [m] = 1 decameter [dam]

10 decameters [dam] = 1 hectometer

10 hectometers [hm] = 1 kilometer [km]

1,000 millimeters [mm] = 1 meter [m]

100 centimeters [cm] = 1 meter [m]

1,000 meters [m] = 1 kilometer [km]

1 decimeters [dm] = 0.1 meter [m]

1 centimeter [cm] = 0.01 meter [m]

1 millimeter [mm] = 0.001 meter [m]

B. Table of Length and Distance Units - Customary:

12 inches (in.) = 1 foot (ft.)

36 inches (in.) = 1 yard (yd.)

3 feet = 1 yard

5,280 feet = 1 mile (mi.)

1,760 yards = 1 mile

1 mile = 1.61 km

1 meter = 3.28 ft

1 meter = 1.09 yd

1 inch = 2.54 cm

1 inch = 25.4 mm

Note:

To change from a larger to smaller unit, **MULTIPLY**.

To change from a smaller unit to larger unit, **DIVIDE**.

Example: 1) Convert 50 cm to mm

Solution:

From the table: 1 cm = 10 mm

50 cm = ? mm

(To convert from a larger to smaller unit we have to multiply)

$$(50 \times 10)/1 = 500$$

So **50 cm = 500 mm**

Example: 2) Convert 45 m to mm

Solution:

From the table: 1 m = 1000 mm

45 m = ? mm

(To convert from a larger to smaller unit we have to multiply)

$$(45 \times 1000)/1 = 45000$$

45 m = 45000 mm

Example: 3) Convert 900 cm to meters

Solution:

From the table: 1 meter = 100 centimeters

(To convert from a smaller to larger unit we have to divide)

$$900 \text{ cm} = ? \text{ m}$$

$$900 \text{ cm} = (900 \times 1)/100 \text{ m}$$

$$900 \text{ cm} = 9 \text{ m}$$

Example: 4) Convert 8 230cm to m and cm

Solution:

From the table: $1 \text{ m} = 100 \text{ cm}$

(To convert from a smaller to larger unit we have to divide)

$$8230 \text{ cm} = ? \text{ m}$$

$$(8230 \times 1)/100 = 8230 \div 100 \text{ (Quotient} = 82 \text{ \& Remainder} = 30)$$

$$8230 \text{ cm} = 82 \text{ m } 30 \text{ cm}$$