

Name: Key

Practice- Conversions

Metric Conversions:

Using K H D (b) d c m, answer the following questions:

1.) $185 \text{ km} = \underline{18,500,000}$ cm

2.) $6,000,000 \text{ mm} = \underline{6,000}$ m

3.) $17 \text{ kg} = \underline{17,000}$ g

4.) $0.00000089 \text{ kg} = \underline{.89}$ mg

5.) $7000 \text{ mm} = \underline{.007}$ km

6.) $4,500 \text{ cm} = \underline{45,000}$ mm

7.) $0.02 \text{ km} = \underline{20}$ m

8.) $1000 \text{ m} = \underline{1}$ km

9.) $150 \text{ cm} = \underline{1.5}$ m

10.) $1.5 \text{ L} = \underline{1500}$ mL

Non-metric Conversions:

Using the given conversion factors, answer the following questions:

$$1 \text{ mile} = 1.609 \text{ km}$$

$$1 \text{ lbs} = 453.6 \text{ g}$$

$$1 \text{ m} = 3.28 \text{ ft}$$

$$1 \text{ in} = 2.54 \text{ cm}$$

$$1000 \text{ m} = 1 \text{ km}$$

11.) Convert 37 miles to km

$$\frac{37 \text{ mi} \left| \frac{1.609 \text{ km}}{1 \text{ mi}} \right.}{1} = 59.5 \text{ km}$$

12.) Convert 100,800 grams to lbs

$$\frac{100,800 \text{ g} \left| \frac{1 \text{ lbs}}{453.6 \text{ g}} \right.}{1} = 222.2 \text{ lbs}$$

13.) Convert 45.87 feet to meters

$$\frac{45.87 \text{ ft} \left| \frac{1 \text{ m}}{3.28 \text{ ft}} \right.}{1} = 13.98 \text{ m}$$

14.) Convert 12 inches to cm

$$\frac{12 \text{ in} \left| \frac{2.54 \text{ cm}}{1 \text{ in}} \right.}{1} = 30.48 \text{ cm}$$

15.) Convert 3 miles to km

$$\frac{3 \text{ mi} \left| \frac{1.609 \text{ km}}{1 \text{ mi}} \right.}{1} = 4.827 \text{ km}$$

16.) Convert 35 miles/hour to m/s

$$\frac{35 \text{ miles} \left| \frac{1.609 \text{ km}}{1 \text{ mi}} \right| \frac{1000 \text{ m}}{1 \text{ km}} \left| \frac{1 \text{ hr}}{60 \text{ min}} \right| \frac{1 \text{ min}}{60 \text{ sec}}}{1} = 15.64 \text{ m/s}$$

17.) Convert 45 miles/hour to m/s

$$\frac{45 \text{ miles} \left| \frac{1.609 \text{ km}}{1 \text{ mi}} \right| \frac{1000 \text{ m}}{1 \text{ km}} \left| \frac{1 \text{ hr}}{60 \text{ min}} \right| \frac{1 \text{ min}}{60 \text{ sec}}}{1} = 20.11 \text{ m/s}$$

18.) Convert 80 miles/hour to m/s

$$\frac{80 \text{ mi} \left| \frac{1.609 \text{ km}}{1 \text{ mi}} \right| \frac{1000 \text{ m}}{1 \text{ km}} \left| \frac{1 \text{ hr}}{60 \text{ min}} \right| \frac{1 \text{ min}}{60 \text{ sec}}}{1} = 35.76 \text{ m/s}$$

19.) Convert 37 m/s to miles/hour

$$\frac{37 \text{ m} \left| \frac{1 \text{ km}}{1000 \text{ m}} \right| \frac{1 \text{ mi}}{1.609 \text{ km}} \left| \frac{3600 \text{ s}}{1 \text{ hr}} \right.}{1} = 82.8 \text{ mi/hr}$$

20.) Convert 11.2 m/s to miles/hour

$$\frac{11.2 \text{ m} \left| \frac{1 \text{ km}}{1000 \text{ m}} \right| \frac{1 \text{ mi}}{1.609 \text{ km}} \left| \frac{3600 \text{ s}}{1 \text{ hr}} \right.}{1} = 25 \text{ mi/hr}$$