

ANSWERS

SNC 1D1 Practice Problems - Scientific Notation/Formulas

1. Rewrite each of the following in scientific notation to three significant digits.

- a. $256\,000\,000 = \underline{2.56 \times 10^8}$
 b. $7\,700\,000 = \underline{7.70 \times 10^6}$
 c. $98\,000\,000\,000 = \underline{9.80 \times 10^{13}}$
 d. $0.0006 = \underline{6.00 \times 10^{-4}}$
 e. $0.000\,000\,000\,003 = \underline{3.00 \times 10^{-15}}$
 f. $0.009 = \underline{9.00 \times 10^{-3}}$

2. Rewrite each of the following in standard notation.

- a. $7.9 \times 10^7 = \underline{79\,000\,000}$
 b. $2.5 \times 10^3 = \underline{2\,500}$
 c. $6.2 \times 10^{16} = \underline{62\,000\,000\,000\,000\,000}$
 d. $2.2 \times 10^{-5} = \underline{0.000022}$
 e. $8.4 \times 10^{-9} = \underline{0.000\,000\,008\,4}$
 f. $4.1 \times 10^{-14} = \underline{0.000\,000\,000\,000\,000\,041}$

3. Calculate the area of a piece of paper with a length of 25 cm and width of 15 cm.

$$\begin{aligned} A &= l \times w \\ &= 25 \text{ cm} \times 15 \text{ cm} \\ &= 375 \text{ cm}^2 \end{aligned}$$

$\hat{M} \approx \text{folded base of } 15 \text{ cm} \approx 15$

4. Calculate the area of a rectangle with a length of 250 cm and a width of 100 mm.

$$\begin{aligned} A &= l \times w \\ &= 250 \text{ cm} \times 10 \text{ cm} \\ &= 2500 \text{ cm}^2 \end{aligned}$$

5. Calculate the volume of a box with length of 1.5 m, width of 500 cm and a height of 2.5 m

$$\begin{aligned} V &= l \times w \times h \\ &= 1.5 \text{ m} \times 5 \text{ m} \times 2.5 \text{ m} \\ &= 18.75 \text{ m}^3 \end{aligned}$$

6. Rearrange the following equations to solve for x.

a. $15 = \frac{x}{30}$

$$x = (15)(30) = 450$$

b. $30 = \frac{15}{x}$

$$x = \frac{15}{30} = 0.5$$

c. $\frac{x}{10} = \frac{10}{200}$

$$200x = (10)(10) \\ x = 0.5$$

d. $\frac{15}{x} = \frac{150}{15}$

$$150x = (15)(150) \\ x = \frac{2250}{15} \\ x = 150$$

e. $250 = 100x + 50$

$$\begin{aligned} 250 - 50 &= 100x \\ 200 &= 100x \\ \frac{200}{100} &= x \\ x &= 2 \end{aligned}$$

f. $500 = (50)(5) + x$

$$\begin{aligned} 500 &= 250 + x \\ 500 - 250 &= x \\ x &= 250 \end{aligned}$$

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Name: _____ Date: _____

Measuring Units Worksheet

M y k b d a b g s e d c m y k

Measuring Units Worksheet

Convert.

1 a. $8,000 \text{ ml} = \underline{8} \text{ L}$

1 b. $1000 \text{ cm} = \underline{10} \text{ m}$

2 a. $10,000 \text{ g} = \underline{10} \text{ kg}$

2 b. $9,000 \text{ ml} = \underline{9} \text{ L}$

3 a. $900 \text{ cm} = \underline{9} \text{ m}$

3 b. $4 \text{ km} = \underline{4000} \text{ m}$

4 a. $8,000 \text{ g} = \underline{8} \text{ kg}$

4 b. $2,000 \text{ ml} = \underline{2} \text{ L}$

5 a. $400 \text{ cm} = \underline{4} \text{ m}$

5 b. $3 \text{ m} = \underline{300} \text{ cm}$

6 a. $800 \text{ cm} = \underline{8} \text{ m}$

6 b. $8 \text{ gm} = \underline{80} \text{ mm}$

7 a. $3 \text{ km} = \underline{3000} \text{ m}$

7 b. $4 \text{ gm} = \underline{40} \text{ mm}$

8 a. $100 \text{ mm} = \underline{10} \text{ cm}$

8 b. $9 \text{ cm} = \underline{90} \text{ mm}$

9 a. $10 \text{ L} = \underline{10,000} \text{ ml}$

9 b. $5 \text{ m} = \underline{500} \text{ cm}$

10 a. $70 \text{ mm} = \underline{7} \text{ cm}$

10 b. $1 \text{ gm} = \underline{10} \text{ mm}$

Convert.

L
m
g

1 a. $7 \text{ km} = \underline{7000} \text{ m}$

1 b. $1 \text{ cm} = \underline{\hspace{1cm}} \text{ mm}$

2 a. $10 \text{ m} = \underline{1000} \text{ cm}$

2 b. $200 \text{ cm} = \underline{\hspace{1cm}} \text{ m}$

3 a. $6,000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$

3 b. $3,000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$

4 a. $2,000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$

4 b. $900 \text{ cm} = \underline{\hspace{1cm}} \text{ m}$

5 a. $60 \text{ mm} = \underline{\hspace{1cm}} \text{ cm}$

5 b. $700 \text{ cm} = \underline{\hspace{1cm}} \text{ m}$

6 a. $90 \text{ mm} = \underline{\hspace{1cm}} \text{ cm}$

6 b. $9,000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$

7 a. $4,000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$

7 b. $5,000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$

8 a. $8,000 \text{ m} = \underline{\hspace{1cm}} \text{ km}$

8 b. $3 \text{ cm} = \underline{\hspace{1cm}} \text{ mm}$

9 a. $7 \text{ cm} = \underline{\hspace{1cm}} \text{ mm}$

9 b. $300 \text{ cm} = \underline{\hspace{1cm}} \text{ m}$

10 a. $20 \text{ mm} = \underline{\hspace{1cm}} \text{ cm}$

10 b. $100 \text{ mm} = \underline{\hspace{1cm}} \text{ cm}$