

# Unit Analysis Practice

1) A Volt (V) can be expressed as:

- a.  $\frac{N \cdot m}{C}$
- b.  $\frac{J}{s}$
- c.  $\frac{\Omega}{C}$
- d.  $\frac{m \cdot C}{s}$

2) Which of the following is NOT a unit of Power?

- a.  $\frac{N \cdot m}{s}$
- b.  $\frac{kg \cdot m^2}{s^2}$
- c.  $\frac{ft \cdot lb}{s}$
- d.  $\frac{V \cdot C}{s}$

3) A Newton (N) can be expressed as:

- a.  $\frac{J \cdot m}{s}$
- b.  $\frac{kg \cdot m^2}{s}$
- c.  $\frac{kg \cdot m}{s^2}$
- d.  $\frac{J}{s^2}$

4)  $\frac{C}{s}$  is the same as a(n):

- a. Ohm ( $\Omega$ )
- b. Volt (V)
- c. Amp (A)
- d. Watt (W)

5) A Volt (V) can be expressed as:

- a.  $\frac{kg \cdot s^2}{m \cdot C}$
- b.  $\frac{kg \cdot m^2}{s^2 \cdot C}$
- c.  $\frac{kg \cdot C}{m^2 \cdot s^2}$
- d.  $\frac{m \cdot s^2}{kg \cdot C^2}$

6)  $\frac{kg \cdot m^2}{s^2}$  is the same as a:

- a. Joule (J)
- b. Newton (N)
- c. Farad (F)
- d. Watt (W)

7) A Watt (W) can be expressed as:

- a.  $\frac{N \cdot m^2}{s^2}$
- b.  $\frac{kg \cdot s}{m^2}$
- c.  $\frac{kg \cdot C}{s^2}$
- d.  $\frac{kg \cdot m^2}{s^3}$

8) Which of the following is NOT a unit of Intensity?

- a.  $\frac{N}{s \cdot m}$
- b.  $\frac{V \cdot C}{s \cdot m^2}$
- c.  $\frac{kg}{s^3 \cdot m}$
- d.  $\frac{lb}{s \cdot ft}$

# Unit Analysis Practice

9) A Pascal (Pa) can be expressed as:

- a.  $\frac{\text{N}\cdot\text{m}^3}{\text{s}}$
- b.  $\frac{\text{kg}\cdot\text{s}}{\text{m}^2}$
- c.  $\frac{\text{kg}}{\text{s}^2\cdot\text{m}}$
- d.  $\frac{\text{kg}}{\text{m}}$

10) How many  $\text{cm}^3$  in  $1 \text{ m}^3$ ?

- a.  $1 \text{ m}^3 = 100 \text{ cm}^3$
- b.  $1 \text{ m}^3 = 10000 \text{ cm}^3$
- c.  $1 \text{ m}^3 = 100000 \text{ cm}^3$
- d.  $1 \text{ m}^3 = 1000000 \text{ cm}^3$

11) How many mL in  $100 \text{ cm}^3$ ?

- a.  $1 \text{ cm}^3 = .001 \text{ mL}$
- b.  $1 \text{ cm}^3 = 1 \text{ mL}$
- c.  $1 \text{ cm}^3 = 100 \text{ mL}$
- d.  $1 \text{ cm}^3 = 1000 \text{ mL}$

12) How many  $\text{m}^3$  in  $1 \text{ cm}^3$ ?

- a.  $1 \text{ cm}^3 = 1 \times 10^{-2} \text{ m}^3$
- b.  $1 \text{ cm}^3 = 1 \times 10^{-4} \text{ m}^3$
- c.  $1 \text{ cm}^3 = 1 \times 10^{-6} \text{ m}^3$
- d.  $1 \text{ cm}^3 = 1 \times 10^{-9} \text{ m}^3$

13) How many L in  $1 \text{ m}^3$ ?

- a.  $1 \text{ m}^3 = 0.1 \text{ L}$
- b.  $1 \text{ m}^3 = 1 \text{ L}$
- c.  $1 \text{ m}^3 = 100 \text{ L}$
- d.  $1 \text{ m}^3 = 1000 \text{ L}$

14)  $\text{Pa}\cdot\text{L}$  is the same as:

- a.  $0.001 \text{ J}$
- b.  $10 \text{ m}^3$
- c.  $1000 \text{ N}$
- d.  $1 \text{ J}$

15)  $\frac{\text{V}}{\text{A}}$  is NOT the same as:

- a.  $\frac{\text{N}\cdot\text{m}\cdot\text{s}}{\text{C}}$
- b.  $\frac{\text{J}\cdot\text{s}}{\text{C}^2}$
- c.  $\frac{\text{W}\cdot\text{s}^2}{\text{C}^2}$
- d.  $\Omega$

16)  $\text{F}\cdot\text{C}$  is the same as:

- a.  $\frac{\text{N}\cdot\text{m}}{\text{C}^2}$
- b.  $\frac{\text{C}^3}{\text{W}\cdot\text{s}}$
- c.  $\frac{\text{J}}{\text{C}^3}$
- d.  $\text{V}$