

**Mathematics Assessment****Sig Fig's count on this test. Highlight your final answer.**

Write the following numbers in scientific notation.

- 1) 156.90 \_\_\_\_\_ 2) 12 000 \_\_\_\_\_ 3) 0.0345 \_\_\_\_\_ 4) 0.008 90 \_\_\_\_\_

Expand the following numbers.

- 5)
- $1.23 \times 10^6$
- \_\_\_\_\_ 6)
- $2.5 \times 10^{-3}$
- \_\_\_\_\_
- 
- 7)
- $1.54 \times 10^4$
- \_\_\_\_\_ 8)
- $5.67 \times 10^{-1}$
- \_\_\_\_\_

Solve the following and put your answer in scientific notation.

- 9)
- $\frac{6.6 \times 10^{-8}}{3.3 \times 10^4} =$
- \_\_\_\_\_ 10)
- $\frac{7.4 \times 10^{10}}{3.7 \times 10^3} =$
- \_\_\_\_\_ 11)
- $\frac{2.5 \times 10^8}{7.5 \times 10^2} =$
- \_\_\_\_\_
- 
- 12)
- $(2.67 \times 10^{-3}) - (9.5 \times 10^{-4}) =$
- \_\_\_\_\_ 13)
- $(1.56 \times 10^{-7}) + (2.43 \times 10^{-8}) =$
- \_\_\_\_\_
- 
- 14)
- $(2.5 \times 10^{-6}) \times (3.0 \times 10^{-7}) =$
- \_\_\_\_\_ 15)
- $(1.2 \times 10^{-9}) \times (1.2 \times 10^7) =$
- \_\_\_\_\_
- 
- 16)
- $(2.3 \times 10^4) \times (2.0 \times 10^{-3}) =$
- \_\_\_\_\_

Give the number of significant digits in the following measurements.

- 17) 2.9910 m = \_\_\_\_\_ 18) 5600 km = \_\_\_\_\_ 19) 0.006 70 kg = \_\_\_\_\_ 20) 809 g = \_\_\_\_\_

Carry out the following problems and give the answer in the correct number of significant digits.

- 21)
- $\frac{2.674 \text{ m}}{2.0 \text{ m}} =$
- \_\_\_\_\_ 22)
- $5.25 \text{ L} \times 1.3 \text{ L} =$
- \_\_\_\_\_ 23)
- $9.0 \text{ cm} + 7.66 \text{ cm} + 5044 \text{ cm} =$
- \_\_\_\_\_
- 
- 24)
- $10.07 \text{ g} - 3.1 \text{ g} =$
- \_\_\_\_\_

Solve for **x** in the following problems.

- 25)
- $3x \div y = 6g \div b$
- \_\_\_\_\_ 26)
- $d = t \div x$
- \_\_\_\_\_
- 
- 27)
- $2X^2 \div 3 = dg$
- \_\_\_\_\_ 28)
- $2\sqrt{x \div c} = y$
- \_\_\_\_\_

Make the following conversions.

- 29) 4008 g = \_\_\_\_\_ mg 30) 48 mL = \_\_\_\_\_ L
- 
- 31) 239 mm = \_\_\_\_\_ cm 32) 38 kg = \_\_\_\_\_ mg

Show all work, label your numbers.

- 33) How many seconds are there in 35 days?
  
  
  
  
  
  
  
  
  
  
- 34) How many days are there in 27 236 seconds?
  
  
  
  
  
  
  
  
  
  
- 35) How many quarts are in a 1.00 liter bottle of pop?
  
  
  
  
  
  
  
  
  
  
- 36) Convert  $1.53 \times 10^3$  km/h into m/s.
  
  
  
  
  
  
  
  
  
  
- 37) Convert 45 m/s into km/h.
  
  
  
  
  
  
  
  
  
  
- 38) Convert 25.6 m/s into mi/h.
  
  
  
  
  
  
  
  
  
  
- 39) How many years are in 3.00 hours?