

Chemistry Worksheet  
Sci. Not. and Sig. Figs. 2

Name \_\_\_\_\_  
Date \_\_\_\_\_ Period \_\_\_\_\_

1. Express the following in scientific notation:

- A. 252,000  $2.52 \times 10^5$  C. .0000587  $5.87 \times 10^{-5}$  E. 1.010101  $1.010101 \times 10^0$   
 B. 20  $2 \times 10^1$  D. 33205  $3.3205 \times 10^4$  F. 3.62  $3.62 \times 10^0$

2. State the number of significant digits that are in the following:

- A. 1000009 7 C. 0.0000001 1 E. 0.00010000 5  
 B. 100000 1 D. 1010101010.0 11 F. 600.000 6

3. Solve the following. Give answers in significant figures and in scientific notation.

- A.  $\frac{(52.25)(3.002)}{(6.0)}$   $2.6 \times 10^1$  F.  $(9.025)(3.695) = 33.35$   
 $3.335 \times 10^1$   
 B.  $(6.25 \times 10^8)(3.6 \times 10^{-3})$  G.  $9.842 \times 10^7$   
 $2.25 \times 10^6 \rightarrow 2.3 \times 10^6$   $8.256 \times 10^{-4}$   
 $1.192 \times 10^{11}$   
 C.  $(9.623 \times 10^{12})(2.25 \times 10^{23})$  H. 1.258  
 $2.17 \times 10^{36}$  2.0  
 $+0.0025$   
 $3.2605 \rightarrow 3.3$  or  $3.3 \times 10^0$   
 D.  $(2.36 \times 10^5)(3.2584 \times 10^7)(6.02 \times 10^{23})$  I. 52.02  
 23.0002  
 $-14.00008$   
 $15.02 \rightarrow 1.502 \times 10^1$   
 $(2.896 \times 10^{12})(2.0 \times 10^3)$   
 $8.0 \times 10^{20}$   
 E.  $(7.2015 \times 10^{63})$   
 $(2.36 \times 10^{23})(8.125 \times 10^7)(3.214 \times 10^2)(6.20145 \times 10^{15}) = 1.88 \times 10^{14}$