

# Rounding / Scientific Notation Practice Problems

## Rounding Rule Summary:

*Rule #1 = below 5, round down*

*Rule #2 = 5 or above, round up*

- 1) Round each of the following to the underlined digit.  
After each, write the number of the rule you used to reach your answer

a) 66.44351 = \_\_\_\_\_      f) 22.285 = \_\_\_\_\_

b) 7.5259 = \_\_\_\_\_      g) 1.0001 = \_\_\_\_\_

c) 479.3705 = \_\_\_\_\_      h) 3202.50001 = \_\_\_\_\_

d) 5653 = \_\_\_\_\_      i) 999.5 = \_\_\_\_\_

e) 225.651 = \_\_\_\_\_      j) 78.11258 = \_\_\_\_\_

f) 74.5 = \_\_\_\_\_      k) 625.50 = \_\_\_\_\_

## Scientific Notation Examples:

$$1315000.02 = 1.32 \times 10^6 \quad 0.000003209 = 3.21 \times 10^{-6}$$

- 2) Convert each of the following to or from scientific notation. When converting to scientific notation, round to 2 decimals. When converting from scientific notation keep all digits.

a) 12000300 = \_\_\_\_\_

b)  $2.00 \times 10^9$  = \_\_\_\_\_

c)  $1.12123 \times 10^4$  = \_\_\_\_\_

d)  $7.85 \times 10^{-3}$  = \_\_\_\_\_

e)  $2.3151 \times 10^2$  = \_\_\_\_\_

f) 324520000 = \_\_\_\_\_

g)  $73.2 \times 10^2$  = \_\_\_\_\_

h) 0.0006346 = \_\_\_\_\_

i) 0.0000000301 = \_\_\_\_\_

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j)  $5.4 \times 10^{-6}$  = \_\_\_\_\_

k) 8024 = \_\_\_\_\_

l) 943500 = \_\_\_\_\_

## ***Significant Digits Practice Problems***

### ***Significant Digits Examples:***

3.12 has 3 significant digits

3.120 has 4 significant digits

0.312 has 3 significant digits

0.0312 has 3 significant digits

0.03120 has 4 significant digits

3) Identify the total number of significant digits in each of the following examples. For each example, underline the significant digits.

a) 346.0 cm \_\_\_\_\_

f) 9990 s \_\_\_\_\_

k) 101.3 kPa \_\_\_\_\_

b) 78.01 km \_\_\_\_\_

g) 0.0004 mL \_\_\_\_\_

l) 101.315 kPa \_\_\_\_\_

c)  $1.02 \times 10^4$  J \_\_\_\_\_

h) 0.0210 mg \_\_\_\_\_

m) 0.00032 cm \_\_\_\_\_

d) 200 g \_\_\_\_\_

i) 42395 km \_\_\_\_\_

n) 1000 lbs \_\_\_\_\_

e) 201 g \_\_\_\_\_

j) 98.00 L \_\_\_\_\_

o) 321.09 mm \_\_\_\_\_