

SIGNIFICANT FIGURES PRACTICE WORKSHEET

1. How many significant figures do the following numbers have?

- | | | | |
|------------|-------|----------------------------|-------|
| a) 2 | _____ | m) 120 | _____ |
| b) 72 | _____ | n) 91010 | _____ |
| c) 890 | _____ | o) 9010.0 | _____ |
| d) 1000 | _____ | p) 1090.0010 | _____ |
| e) 0.00120 | _____ | q) 3.4×10^4 | _____ |
| f) 8120 | _____ | r) 9.0×10^{-3} | _____ |
| g) 780. | _____ | s) 9.010×10^{-2} | _____ |
| h) 0.023 | _____ | t) 0.00030 | _____ |
| i) 12 | _____ | u) 1020010 | _____ |
| j) 1.2 | _____ | v) 918.010 | _____ |
| k) 1.20 | _____ | w) 0.00390 | _____ |
| l) 1.02 | _____ | x) 7.991×10^{-10} | _____ |

2. Round each of the following to 3 significant figures.

- | | | | |
|---------------------------|-------|--------------|-------|
| a) 707.5 | _____ | g) 4.53619 | _____ |
| b) 2310.2 | _____ | h) 43.659 | _____ |
| c) 0.0003350 | _____ | i) 876493 | _____ |
| d) 10.26730 | _____ | j) 0.0008769 | _____ |
| e) 18.95×10^{21} | _____ | k) 5.457 | _____ |
| f) 120000 | _____ | l) 5.451 | _____ |

3. Convert each of the following into correct scientific notation.

- | | | | |
|---------------|-------|---------------------------|-------|
| a) 123 | _____ | d) 3200.0×10^2 | _____ |
| b) 1747 | _____ | e) 0.002014×10^2 | _____ |
| c) 0.00000984 | _____ | f) 0.1 | _____ |

4. Add/Subtract as indicated and round the answer using the correct number of significant digits:

a) $85.26 \text{ g} + 4.7 \text{ g}$

d) $27.34\text{mL} + 6.90\text{mL} + 13.124\text{mL}$

b) $1.07 \text{ km} + 0.608 \text{ km}$

e) $2.8023\text{m} - 4.762\text{m}$

c) $186.4 \text{ kg} - 57.83 \text{ kg}$

f) $2\text{m} + 13\text{cm}$

5. Multiply/Divide as indicated and round the answer using the correct number of significant digits.

a) $5108\text{m} \times 4.2107\text{m}$

d) $1.67 \times 10^{-2} \text{ km} \times 8.5 \times 10^{-6} \text{ km}$

b) $0.32\text{cm} \times 14.50\text{cm} \times 120\text{cm}$

e) $2.6 \times 10^4 \text{ cm} \times 9.4 \times 10^3 \text{ cm}$

c) $24.1\text{g} / 0.005\text{L}$

6. Perform the following operations giving the proper number of significant figures in the answer:

a) 23.4×14 _____

b) $0.005 - 0.0007$ _____

c) $7.895 + 3.4$ _____

d) $7.895 / 34$ _____

e) 0.0945×1.47 _____

f) $0.2 / 0.0005$ _____

g) $(1.0+2.00) / 3.01$ _____

h) $(1.0+21) / 2.0$ _____

i) $(27.00 + 2.001) / 3.00$ _____

j) $[(10.3) + (0.01345)] \div [(10.3) \times (0.01345)]$ _____

k) $(23.5-2.14) \div 1.54$ _____

7. The following are placed in a beaker weighing 39.457g: 2.689g of NaCl, 1.26g of sand and 5.0g water. What is the final mass of the beaker?

8. If the beaker containing a sample of ethanol weighs 49.8767 g and the empty beaker weighs 49.214 g, what is the mass of the ethanol?