

# Significant Digits Worksheet

**Remember These Rules:**

1. *Digits from 1-9 are always significant.*
2. *Zeros between two other significant digits are always significant*
3. *One or more additional zeros to the right of both the decimal place and another significant digit are significant.*
4. *Zeros used solely for spacing the decimal point (placeholders) are not significant.*

**Identify the number of significant digits show in each of the following examples.**

- |              |       |                |       |
|--------------|-------|----------------|-------|
| (1.) 400     | _____ | (10.) 450.0    | _____ |
| (2.) 200.0   | _____ | (11.) 350      | _____ |
| (3.) 0.0001  | _____ | (12.) 44578    | _____ |
| (4.) 218     | _____ | (13.) 305      | _____ |
| (5.) 320     | _____ | (14.) 0.006200 | _____ |
| (6.) 0.00530 | _____ | (15.) 565.05   | _____ |
| (7.) 22568   | _____ | (16.) 5500     | _____ |
| (8.) 4755.50 | _____ | (17.) 74.00    | _____ |
| (9.) 7000    | _____ | (18.) 7040.0   | _____ |

## Adding and Subtracting with Significant Digits

***RULE: When adding or subtracting, your answer must show as many decimal places as the measurement having the fewest number of decimal places.***

**Perform the following calculations and round according to the rule above.**

(19.)  $2.25 + 6 = \underline{\hspace{2cm}}$

(20.)  $0.04 + 2.7 = \underline{\hspace{2cm}}$

(21.)  $18.640 + 670.445 = \underline{\hspace{2cm}}$

(22.)  $0.70 - 0.1 = \underline{\hspace{2cm}}$

(23.)  $640 - 627.03 = \underline{\hspace{2cm}}$

(24.)  $12.09 - 6.7 = \underline{\hspace{2cm}}$

(25.)  $3.458 + 53.252 + 0.601 = \underline{\hspace{2cm}}$

(26.)  $74.160 - 4.8 - 0.470 = \underline{\hspace{2cm}}$

(27.)  $7000.40 + 6.2 + 6.32 = \underline{\hspace{2cm}}$

(28.)  $6.790 - 2 = \underline{\hspace{2cm}}$

(29.)  $6.790 - 2.5 = \underline{\hspace{2cm}}$

(30.)  $3.001 + 2.151 = \underline{\hspace{2cm}}$

**Part I. Change the following numbers to proper scientific notation**

(31.) 65.7

(32.) 0.00545

(33.) 22450000

**Part II. Change the following numbers to standard notation**

(34.)  $8.85 \times 10^4$

(35.)  $1.847 \times 10^2$

(36.)  $3.400 \times 10^{-3}$

## Significant Digits & Notation

*Change the following numbers to proper scientific notation or standard notation.*

(37.) 2 900 000 \_\_\_\_\_

(38.) 0.587 \_\_\_\_\_

(39.)  $8.40 \times 10^{-3}$  \_\_\_\_\_

(40.)  $5.5 \times 10^{-6}$  \_\_\_\_\_

(41.) 0.0456 \_\_\_\_\_

(42.) 4082.2 \_\_\_\_\_

(43.)  $4.030 \times 10^1$  \_\_\_\_\_

(44.)  $1.2 \times 10^7$  \_\_\_\_\_