

Chemistry 12 - Review of Significant Digits

TOTAL = 28

The rules for zeros in significant digits are as follows:

- a) All zeros between non-zero digits are significant.
- b) Zeros at the beginning of a number (eg. 0.0095) are **NOT SIGNIFICANT** !
If the number 0.0095 was written in scientific notation, it would be: 9.5×10^{-3} . The exponent is not counted as significant so this number has 2 significant digits.
- c) Zeros on the right side of a number (at the end) are significant if the **DECIMAL POINT** is shown.
- eg) 50.00 has 4 significant digits
43.0 has 3 significant digits
20. has 2 significant digits
100. has 3 significant digits
- d) Zeros to the left of an **UNDERSTOOD** decimal point are **NOT** significant.
- eg) 300 has 1 significant digit
10 000 has 1 significant digit
12 320 has 4 significant digits
420 has 2 significant digits

1. Find the number of **significant digits** in each of the following measurements:

- | | | | |
|--------------------------------|-----|---------------------------------|-----|
| a) 3.4005 | (5) | f) 9.080×10^{-3} | (4) |
| b) 2980 | (3) | g) 1.00 | (3) |
| c) 3.20×10^{-2} | (3) | h) 0.0027890 | (5) |
| d) 0.000308 | (3) | i) 320 000 | (2) |
| e) 23.000 | (5) | j) 9 | (1) |