

What are significant digits?

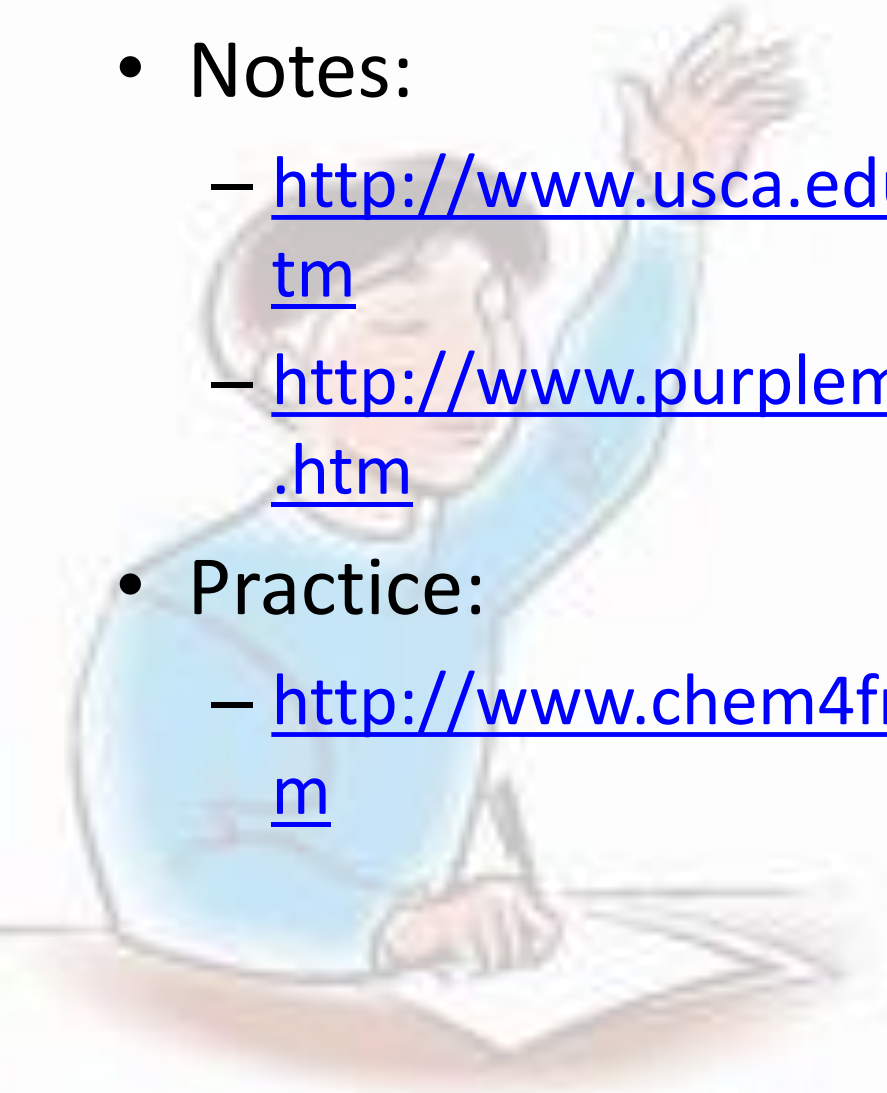
- Notes:

- <http://www.usca.edu/chemistry/genchem/sigfig.htm>

- <http://www.purplemath.com/modules/rounding2.htm>

- Practice:

- <http://www.chem4free.info/calculators/signdig.htm>



What are significant digits?



Unit 1: Scientific Notation

What are significant digits?

Significant Figures

- Digits that carry meaning contributing to its precision.



What are significant digits?

All Numbers Except

- All leading zeros;
- Trailing zeros when they are merely placeholders to indicate the scale of the number; and
- Digits that cause a solution to have a greater precision than the equipment supports.



What are significant digits?

Rules

- All non-zero digits are considered significant.
- For example:
 - 91 has two significant figures
 - 123.45 has five significant figures



What are significant digits?

Rules

- Zeros appearing anywhere between two non-zero digits are significant.
- For example:
 - 101.1203 has seven significant figures



What are significant digits?

Rules

- Leading zeros are not significant.
- For example:
 - 0.00052 has two significant figures



What are significant digits?

Rules

- The significance of trailing zeros in a number not containing a decimal point can be ambiguous.
- A decimal point may be placed after the number.
- For example:
 - "100." has three significant figures

