Rules for Significant Digits

1. All nonzero digits are significant.
2. Zeros between nonzero digits are significant.
3. Start counting significant digits at the first nonzero digit.
4. Counted numbers and definitions do not apply to significant digits (only measurements).
5. Zeros at the end of a number without a decimal in it are not significant.
6. Zeros at the end of a number with a decimal in it (anywhere in it) are significant.

Write the number of significant digits in the following numbers. If the unit is not a measurement, then write N/A for not applicable.

a) 50 m _____
b) 0.000935 mg _____
c) 909,000 cl _____
d) 64,000 peanuts _____
e) 59,000. dag _____
f) 0.000 960 035 000 km _____

Convert the following using a one-step conversion. Show all work starting with the given number and unit over one then multiply by the conversion factor.

1. 8,560 hm to m
2. 0.9400 g to mg
3. 4,500 ml to l
4. 0.000 450 dag to g
5. 40,980 m to km

Work these on a separate page.

Convert the following using a two-step conversion. Show all work starting with the given number and unit over one then multiply by two conversion factors going to the base unit in between.

1. 9.887 km to cm
2. 0.370 cg to mg
3. 6,500 ml to dal
4. 0.000 620 dag to dg
5. 406,980,560 mm to km

Work these on a separate page.