Sig Fig Notes

1) Non-zero digits are always significant.

2) All final zeros after the decimal are significant

3) Zeros between two other significant figures are always significant.

4) Zeros used solely for spaceing are NOT significant.
They are simply placeholders. Ex: .00357

Examples: Determine how many sig figs are in each of the following measurements. *Also, convert to correct sci. notation form 1-7.

1) 420,800 cm — 4 SF — 4.208×10^5 cm

2) 43.20 m/s — 4 SF — 4.320×10^1 m/s

3) .0020 dm^2 — 2 SF — 2.0×10^{-3} dm^2

4) 2.00 m/s — 3 SF — 2.00×10^0 m/s

5) 200 N — 1 SF — 2×10^2 N

6) .01°C — 1 SF — 1×10^{-2} °C

7) 80,709,000 km — 6 SF — 8.07090×10^5 km

8) 3.01×10^4 — 3 SF — 30,100

9) 3.0×10^2 — 2 SF — 300

Convert to standard form.

Sig Fig Operations Rules

+/- Round to the least precise value used in the calculation.

x/÷ Round to the least number of sig figs.

Try This:

1) Sum of 24.0 kg , 2.3 kg , 3.23 kg , 29.53 kg = 59.06 → 59.1kg

2) Sum 4.5×10^7 m , 6.45×10^7 m = $10.95 \times 10^7 = 11.0 \times 10^7 = 1.10 \times 10^8$ m

3) 71×10^3 N - 10.3×10^3 N = $60.7 \times 10^3 = 61 \times 10^3 = 6.1 \times 10^4$ N

4) 12.56 kg (89.01350 m/s^2) = 1118.00956 = 1118 kgm/s2

5) 5.80×10^9 S + 3.20×10^8 S = $61.20 \times 10^8 = 61.2 \times 10^8 = 6.12 \times 10^9$ s

6) 8.12×10^7 g ÷ 6.20×10^5 g = 130.96774194 = 131

Scientific Notation Rules w/ adding and subtracting

---

1) Convert so that the powers of 10 agree.

2) Look at precision of coeficients.

3) Round to the least precise coefficient.

4) Put in correct sci notation form.