

There are also different rules for reporting the answer when you add or subtract:

- 1) The answer should have the same number of decimal places as that of the number with the least decimal.

Example:
$$\begin{array}{r} 4.838 \text{ g} \\ +1.0023 \text{ g} \\ \hline 5.8403 \text{ g} = 5.84 \text{ g} \end{array}$$

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 is 0-4, so round down.

$$\begin{array}{r} 486.58 \text{ g} \\ - 421. \text{ g} \\ \hline 65.58 \text{ g} = 66 \text{ g} \end{array}$$

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 is 5-9, so round up.

NOTE: IN ADDITION AND SUBTRACTION, DECIMAL POINTS MUST BE LINED UP!!

Solve the following:

a) 0.00000313

$$\begin{array}{r} +17 \\ \hline 17 \end{array}$$

b) 4.9670

$$\begin{array}{r} - 3.1 \\ \hline 1.9 \end{array}$$

c) 0.000343

$$\begin{array}{r} +0.17 \\ \hline = 0.17 \end{array}$$

d) 78

$$\begin{array}{r} - .99 \\ \hline = 77 \end{array}$$

e) $336,000 - 33,000.03 = 303,000$
 3.03×10^5

f) $0.99 - .1 = 0.9$

Additional practice problems:

How many sig. figs in the following number?

- a) 87 2 b) 190. 3 c) 0.000190 3 d) 606.0 4 e) 1.008 4

Round off the following to 2 S.F.

- a) 86730 87 b) 120.99 120 c) .0003450 0.0035 d) 0.0555 0.056 e) 9898989 9.9×10^6

How many S.F. should be in the following answers: (Don't work out the problems!)

a) $0.2 \times 43.98 =$ 1 b) $43,000,000 \times 0.00546 =$ 2 c) $43.0 - 17.2 =$ 3

d) $0.00235 - 3.0 =$ 2 e) $143.000 - 3.45 =$ ~~3~~ 5 (139.55) f) $3.40 \times 0.04 =$ 2 #

g) $\frac{0.300 \times .802}{30.44} =$ 3 h) $\frac{39.04 \times 1.009}{3} =$ 1 i) $\frac{0.00390 \times 2.0098}{2.02} =$ 3

Solve the following problems:

a)
$$\begin{array}{r} 0.004598 \\ +4 \\ \hline 4 \end{array}$$
 b) $\frac{43.2 \times 30.3 \times 17.0}{43.30 \times 0.0045 \times 99} =$ 1200
 1.2×10^3
 (2 sig)

c)
$$\begin{array}{r} 338855.0 \\ +10000000.003 \\ \hline = 10338855.0 \end{array}$$

d)
$$\begin{array}{r} 73 \\ -14.98 \\ \hline = 58 \end{array}$$

e)
$$\begin{array}{r} 8.0 \\ -1.99 \\ \hline = 6.0 \end{array}$$

f) $17.0 + 1.4 - 8.9 = 9.5$

How many S.F. are in the following numbers?

a) 3.0×10^9 2

b) 0.0090 2

c) 4.20×10^4 3

d) $900,000$ 1

e) $900,000.$ 6

f) 9.4450×10^7 5