Solutions

Each answer shows the steps, then the **result**.

2.1

- its molecular mass / M_r (the mass of the whole molecule)

2.2

- bromine (Br) — the $^{79}Br/^{81}Br$ ratio is about 1:1

3.1 B

- $A_r = \dfrac{(35 \times 75) + (37 \times 25)}{100} = 35.5$

3.2 B

- A loss of 15 is a CH_3 group

3.3

(a)

- $n = \dfrac{100 \times 4.4}{1.1 \times 100} = 4$

(b)

- $C_4H_8O_2$ (e.g. butanoic acid)

3.4

- bromine; the two peaks two apart in a ~1:1 ratio match the ^{79}Br and ^{81}Br isotopes