

[Relative formula mass]

Q1.(2019)

C ✓

Q2.(2019)

D ✓

Q3.a(2020)

FIRST CHECK ANSWER ON ANSWER LINE
If answer = 79.9 award 2 marks

2

2 x 2.2

$$184.1 - 24.3 = 159.8 \quad \checkmark$$

$$159.8 \div 2 = 79.9 \quad \checkmark$$

ALLOW ECF from incorrect subtraction

Q3.b(2020)

Bromine/Br ✓

1

3.2b

ECF from 12(c)(i) if element correctly matched to an incorrect A_r in group 7

Q4.(2022)

FIRST CHECK ANSWER IN TABLE
If answer = 46 award 2 marks

$$(M_r =) 14.0 + 16.0 + 16.0 \quad \checkmark$$

$$= 46 \quad \checkmark$$

Q5.(2023)

B

Q6.a(2023)

161.5 ✓

Q6b(2023)

First check answer on answer line
If answer = 40.5% award 3 marks

$$(65.4 \div 161.5) \times 100 \checkmark$$

$$= 40.495 \checkmark$$

$$= 40.5 (\%) \checkmark$$

3

2.2

2 x 1.2

ALLOW ECF from incorrect M_r from 14(d)(i)

ALLOW 40.495 up to calculator value 40.49535604, correctly rounded

ALLOW the decimal place mark from an incorrect calculation which uses the answer to 14d(i)

Q7.a(2024)

First check answer on the answer line
If answer = 17.0 / 17 award 1 mark

$$16.0 + 1.0$$

$$= 17.0 / 17 \checkmark$$

Q7.b(2024)

First check answer on the answer line
If answer = 40.1 award 2 marks

$$\text{OH}^- \times 2 = 17.0 \times 2$$

$$= 34.0 / 34 \checkmark$$

$$74.1 - 34.0 = 40.1 \checkmark$$

2

2 x 2.2

ALLOW ECF from (a)

ALLOW if 17 is subtracted twice

Q7.c(2024)

Calcium / Ca $\checkmark$

1

2.1

ALLOW ECF from (b) only if element is in Group 2