Finding a Missing Ion Count in a Mixture

Scoring guide · one credit per question · review written work against each rubric

Finding a Missing Ion Count in a Mixture

Question 1

Choice (3)

The total positive charge is 12 × 2 + 8 × 1 = 32, so 32 singly negative ions are needed.

Question 2

P has formula MX_2. It contributes two X^- ions for each M^{2+}, for 24 X^- ions.

Question 3

The new counts are 8 M^{2+} and 12 N^+. They supply 16 + 12 = 28 positive charge units, so the mixture contains 28 X^- ions.

Question 4

Both mixtures contain 20 positive ions, but they contain different proportions of ions with charges +1 and +2. Charge balance depends on total charge.