Choosing an Order to Separate Two Solids

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

Choosing an Order to Separate Two Solids

Question 1

Choice (2)

All 40 g of X can dissolve at 80 °C, but only 20 g of the 40 g of Y can dissolve.

Question 2

Y begins at 40 g and 20 g dissolves at 80 °C. The filter can remove 40 − 20 = 20 g of solid Y.

Question 3

The liquid contains 40 g X and 20 g Y before cooling. At 20 °C it holds only 20 g X in solution, so 20 g X forms a solid. Y stays dissolved because 20 g is below its 50 g limit.

Question 4

At 20 °C the liquid can hold only 20 of the 40 g of X, so some X forms a solid. It can hold 50 g of Y, more than the 20 g of Y present. No Y forms a solid under the stated model.