Tracking Two Vapors Over One Liquid

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

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Question 1

P contributes 0.50 × 12 = 6 kPa and Q contributes 0.50 × 4 = 2 kPa. Their sum is 8 kPa.

Question 2

Choice (4)

P accounts for 6 kPa of the total 8 kPa. Its vapor fraction is 6/8 = 3/4.

Question 3

The liquid is half P, but pure P has the larger vapor pressure at this temperature. At equal liquid fractions P contributes more pressure than Q and accounts for three quarters of the vapor particles.

Question 4

P contributes 0.25 × 12 = 3 kPa and Q contributes 0.75 × 4 = 3 kPa. Both substances account for half of the vapor even though their liquid fractions are different.