Checking Pressure After Water Condenses

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

Checking Pressure After Water Condenses

Question 1

Choice (1)

The amount of dry air is unchanged, so its pressure is 96 × 300/320 = 90 kPa.

Question 2

Dry air contributes 90 kPa and water vapor contributes 3.5 kPa, giving 93.5 kPa.

Question 3

If its amount were unchanged, the water vapor would give 8.0 × 300/320 = 7.5 kPa. The actual 3.5 kPa is lower, so less water remains in the gas phase under the stated model.

Question 4

The temperature, volume, and amounts in the gas phase match the original record. The dry-air pressure returns to 96 kPa and the vapor pressure to 8.0 kPa, for 104 kPa.