Checking an Air Cushion With Two Loads

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

Checking an Air Cushion With Two Loads

Question 1

Choice (4)

The gas balances 100 kPa from outside air plus 50 kPa from load Q.

Question 2

P gives 120 × 3.0 = 360 kPa·L. Q gives 150 × 2.4 = 360 kPa·L.

Question 3

The new total gas pressure is 70 + 50 = 120 kPa. The constant product gives 360/120 = 3.0 L.

Question 4

The load still contributes 50 kPa. Ignoring the decrease in outside pressure misses the decrease in total gas pressure, which allows the gas to expand.