Question number	Answer	Notes	Marks
2 (a)	B (hit the walls of the container harder)		1
(b)	(average) **KE** (of particles) **decreases** (as the temperature falls); AND one of • (because) they move slower; • idea that at 0 K the particles have no kinetic energy; • idea that at 0 K the particles are not moving;	ignore • ` particles freeze' • KE is lost allow • 'it' for average KE • absolute zero for 0 K	2
2 (c) (i)	300 K;		1
(c) (ii)	both temperatures seen in Kelvin; Substitution; (Rearrangement and) Evaluation; e.g. $\frac{210\ 000}{300} = \frac{P_2}{354}$ this would get 2 marks if seen $\frac{210\ 000 \times 354}{300} = P_2$ this would get 2 marks if seen $(P_2) = 250$(kPa) this is 3 marks	no mark for equation as it is given on page 2 **allow** • $\frac{210\ 000}{27} = \frac{P_2}{81}$ for 1 mark • 630 (kPa) for 2 marks • bald answer 248 (kPa) for 3 marks • answers which round to 250 Power of Ten error (POT) =-1	3

(Total for Question 2 = 7 marks)