Question number	Answer	Notes	Marks
7 (a) (i)	pressure = force / area	Allow symbols and rearrangements e.g. p=F/A	1
(ii)	substitute; rearrange; evaluate; **matching** unit; e.g. 270 000 = F ÷ 0.016 1 mark F = 270 000 x 0.016 2 marks 4320 3 marks N 4th mark	Substitution and rearrangement in either order allow in words Allow alternatives with matching unit, e.g. 4.32 3 marks kN 4th mark	4
(b)	Any three of MP1. idea of (continuous) random movement; MP2. collisions / impact/eq; MP3. with (inside) **walls** (of tyre); MP4. idea that force is produced (by bombarding molecules); MP5. idea of pressure as force on an area;	 Allow momentum or NIII argument	3
(c)	any three of- MP1. (now) more particles/molecules in the tyre; MP2. molecules have more speed /more energy (because gas is warmer); MP3. more impacts/more frequent impacts / harder impacts (with walls of tyre); MP4. (hence) more force on the inside;	 Allow change of momentum argument Allow collisions with walls do not award MP3 if the impacts are only with other molecules	3

Total 11 marks