Question Number	Answer		Mark
14(a)	Use of $pV = NkT$	(1)	
	Conversion of temperature to kelvin	(1)	
	$p = 5.1 \times 10^5$ Pa	(1)	(3)
	Example of calculation		
	$p = \dfrac{7.5 \times 10^{24} \times 1.38 \times 10^{-23} \text{ J K}^{-1} \times (273 + 20)\text{K}}{6.0 \times 10^{-2} \text{ m}^3} = 5.05 \times 10^5 \text{ Pa}$		
14(b)	Use of $pV = NkT$ with 288 K	(1)	
	Percentage remaining = 91(%)	(1)	(2)
	Example of calculation		
	$N = \dfrac{4.5 \times 10^5 \text{Pa} \times 6.0 \times 10^{-2} \text{ m}^3}{1.38 \times 10^{-23} \text{ J K}^{-1} \times 288 \text{ K}} = 6.79 \times 10^{24}$		
	Percentage remaining $= \dfrac{6.8 \times 10^{24}}{7.5 \times 10^{24}} \times 100 \% = 90.5 \%$		
	Total for Question 14		**5**