

Exam

3

a) $\frac{3}{2} PV = 227,981$

$$E = n C_V T$$

b) $3,408 \cdot 10^{-16} \cdot T$ (cant find T or N)

$$\frac{3}{2} PV$$

c) need + for both

$$V_{rms} = .944 \text{ V}$$

$$k_{rms} = 2,071 \cdot 10^{-23} \text{ T}$$

$$\lambda = \frac{k_B T}{4\pi \sqrt{2} r^2 p} = 3,408 \cdot 10^{-16} \cdot T$$

$$\lambda = \frac{1}{4\pi \sqrt{2} r^2 \frac{N}{V}}$$

$$V_{rms} = \sqrt{\frac{3 R T}{M}} = \sqrt{\frac{3 R}{M}} \sqrt{T}$$

$$E_{rms} = \frac{3}{2} k_B T$$