**Quiz 9**

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. At what temperature is the rms speed of a Hydrogen molecule equal to 2200 m/s?
2. A lead (16cm x 10cm x 3cm) brick is heated from 70oF to 300oF. By how much does the volume expand?

*KE*T = 3/2 *kB T* *KE*R = *kB T* KE = ½ *m v*2

*kB* = 1.38 x 10-23 J/K T = TC + 273.15 TF = 9/5TC +32

*L* = *L*o *T* *A* = *A*o *T* *V* = *V*o *T*

*mH* = 1.67 x 10-27 kg lead = 2.89 x 10-5 oC-1