Chemistry 115 Name KEY

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Quiz 8a (20 points) November 24, 2008

1. (6 points) Write a nuclear equation for the indicted decay of each of the following nuclides
   1. Ra-226 by alpha emission
   2. Pa-234 by beta emission
2. (6 points) Fill in the missing particles in each of the following nuclear equations
3. (5 points) Polonium-218 is an alpha emitter with a half-life of 3.0 minutes. How long will it take for a 512 g sample of polonium to decay to 1 gram?

It will take 9 half lives to decay to 1 g. 27 minutes.

1. (3 points) On the basis of kinetic-molecular theory, explain why vapor pressure increases with temperature.

As the temperature increases, more molecules have enough energy to escape to the vapor phase and the vapor pressure increases.