Atomic Practice Sheet Name_____

1) The outer edge of an atom is 10,000 times larger than the radius of the nucleus. Come up with an analogy to describe this.

2) Fill in the following table:

	Protons	Neutrons
$^{14}_{7}N$		
$^{15}_{7}N$		
$^{23}_{11}Na$		
$^{16}_{8}O$		

3) What is an isotope?

4) An element has two isotopes: X and Y. In a sample of this element, X is found 80% of the time and Y is found 20% of the time. Will the atomic mass of this element be closer to the mass of X , closer to the mass of Y, or exactly in between. Why?

5) Which of the following are different isotopes of the same element? Circle all that apply.

a) $^{2}_{1}H$ and $^{1}_{1}H$

b) $^{4}_{2}He$ and $^{4}_{3}Li$

c) $^{16}_{8}O$ and $^{16}_{8}O^{-2}$

d) $^{14}_{7}N$ and $^{15}_{7}N$

e) $^{1}_{1}H$ and $^{1}_{1}H^{-1}$

6) What is an ion? How do you make an ion from a neutral atom?

7) Fill in the following table:

	Atom	Protons	Electrons
Gold	Au		
Sodium	Na^{+}		
Sulfur	S^{2-}		
Nitrogen	N^{5+}		
Nitrogen	N^{3-}		