Science 8

Final Exam Review (1 of 4)

Name:
Date:
Block:

Lab Skills

1. List the 6 steps of the scientific method.
   i.
   ii.
   iii.
   iv.
   v.
   vi.
2. Identify the following as a qualitative or quantitative observation:
   i. 5 cm high _____
   ii. Moves 5 km/hr _____
   iii. Colourless _____
   iv. Green and blue _____
   v. Feels slippery _____
   vi. Tastes salty _____

3. You plant two apple trees in your backyard. They get the same amount of rain and sunlight. You give special fertilizer to only one of the apple trees to see if it helps it grow faster. Identify the independent and dependent variable in your experiment.
   - Independent:
   - Dependent:

4. Identify the following as true or false.

_____ You may eat and drink during a lab as long as you keep the food clean.

_____ Goggles must be kept in place until *everybody* has finished the lab.

_____ The teacher appreciates your imaginative additions to the lab; feel free to improvise.

_____ If a chemical gets in your eye, you must rinse your eye under the *faucet in the sink*.

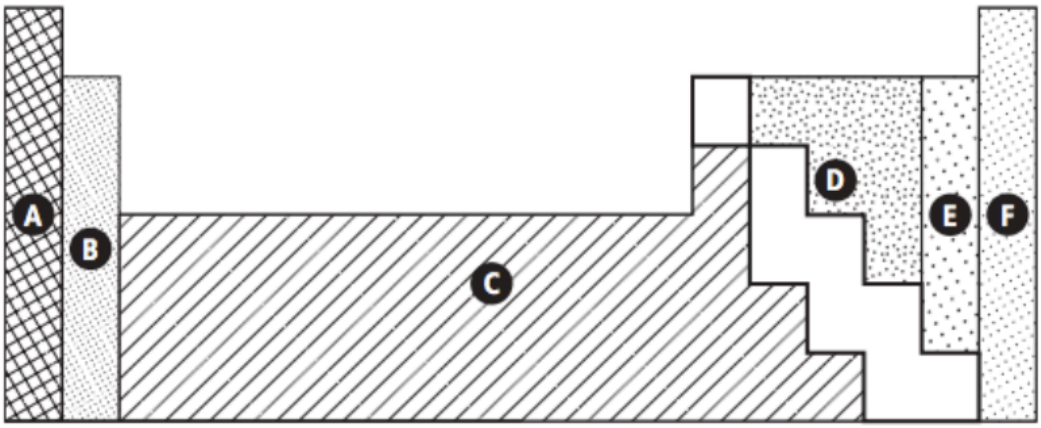
_____ Most people will not be calm enough to remember to stop, drop and roll if their clothing is on fire.

_____ Always cut toward *yourself* when using a knife or razor blade.

_____ Your hands *cannot* be wet if you are handling electrical cords.

Atomic Theory

1. Use the periodic table below to help answer these questions:



a. Helium: _____

b. Nitrogen: _____

c. Vanadium: _____

d. Palladium: _____

e. Noble gases: _____

f. Magnesium: _____

g. Most reactive: _____

h. Least reactive: _____

i. Halogens: _____

j. Transition metals: _____

2. Complete the following table:

Element Name	Element Symbol	Atomic Number	Atomic Mass	# of protons	# of neutrons	# of electrons
	Ti					
		35				
	Au					
						83
					8	

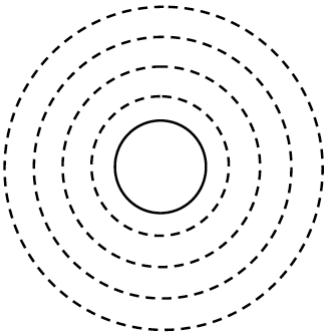
3. Define a subatomic particle:

4. What does the atomic number represent?

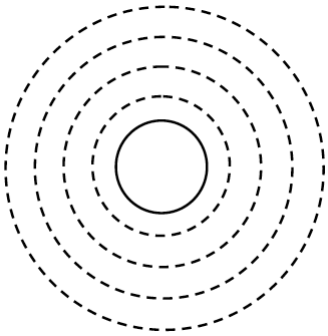
5. What does the atomic mass measure?

6. Draw the Bohr diagram for the following elements:

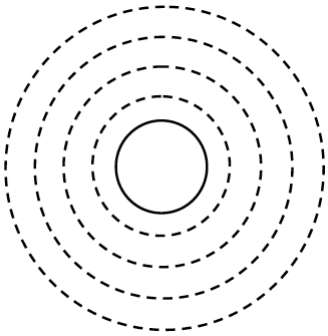
Carbon



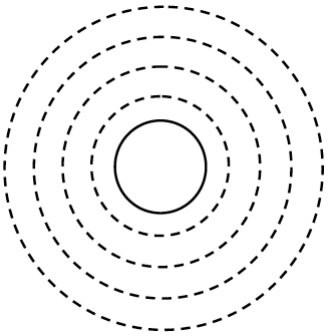
Hydrogen



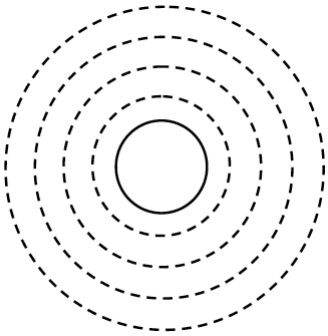
Oxygen



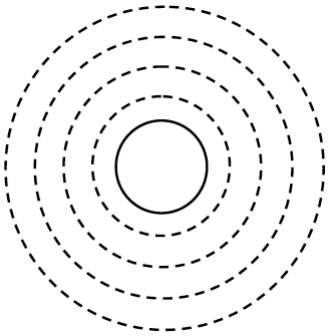
Chlorine



Sodium

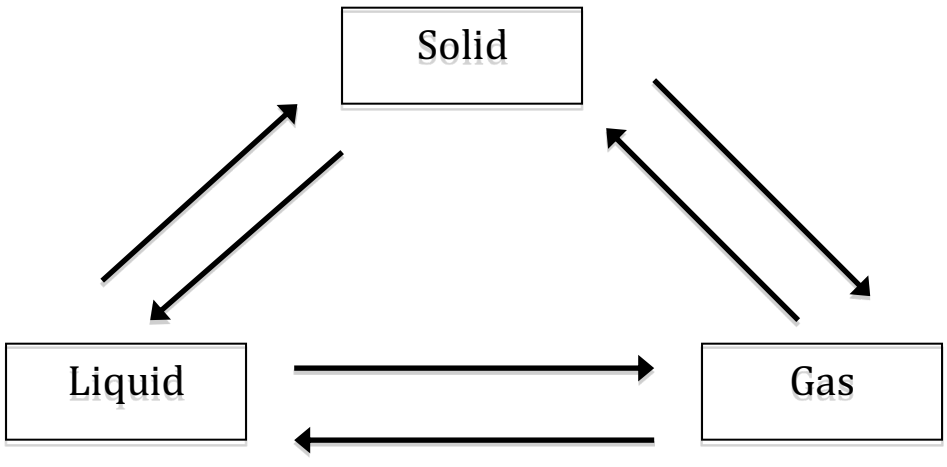


Neon



7. Classify the following as an element, compound or mixture:
   a) Water: _____
   b) Silver: _____
   c) Made up of only one kind of atom: _____
   d) Spaghetti sauce: _____
   e) Can be heterogeneous or homogeneous: _____
   f) Oxygen: _____
   g) Has different properties throughout: _____
   h) Magnesium: _____
   i) Is a pure substance and is made up of more than one kind of atom: _____
   j) CO_2: _____

8. Label the following arrows for the phase change and indicate if heat is gained (+) or lost (-) in the diagram below:



9. In the Kinetic Molecular Theory:
    i. All matter is made up of _____.
    ii. There is _____ between particles.
    iii. Particles are constantly _____.
    iv. _____ makes particles move.
    v. How does the space between particles change as energy/heat is added? Explain your answer.

    vi. How does the space between particles change as energy/heat is lost? Explain your answer.

    vii. Define thermal expansion and thermal contraction. In your answer, provide an example of each.