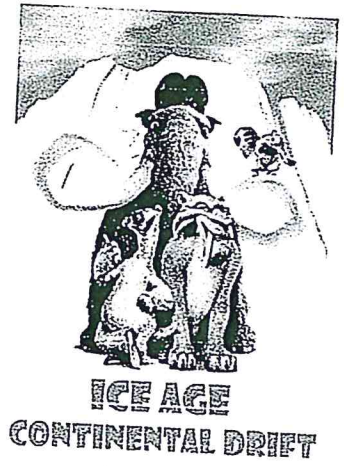Name: _____   Date of Exam: _____

CHAPTER 13: GEOLOGIC TIME REVIEW WORKSHEET

Vocab to Know: study Quizlet:

Uplift
Weathering
Erosion
Erosion Half-life
Theory of plate tectonics
Mantle
Continental Crust
Oceanic crust
Convergent zones
Subduction zone
Volcanic arcs

Rift valley
Divergent zones
Transform fault
Convection
Hot spots
Endemic

ICE AGE
CONTINENTAL DRIFT

1. What geologic process is responsible for tectonic plate movement? Draw a labeled diagram showing how this works.

Convection cells:

plate

more/less dense

Heat source
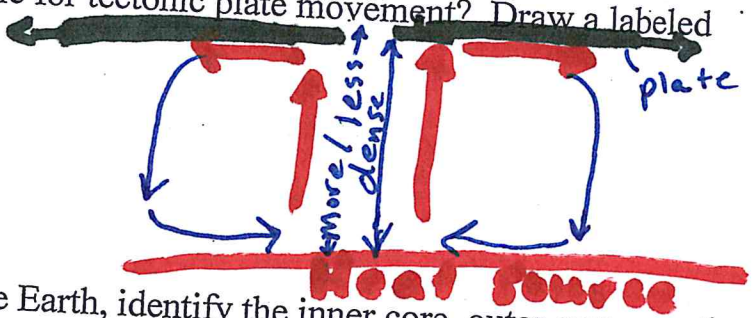
2. Draw and label a cross section of the Earth, identify the inner core, outer core, mantle continental crust and oceanic crust.
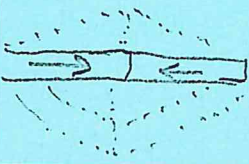
Oceanic Crust
Continental crust
Mantle
Inner Core
outer Core
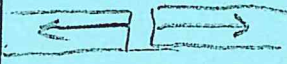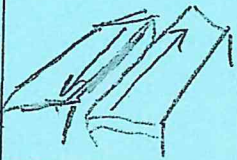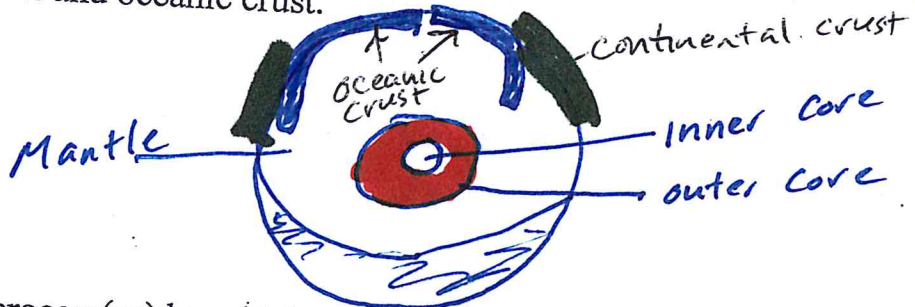
3. Describe the process(es) by which mountains can be formed, such as the Cascade Mountain Range. Be sure to use some of your vocab terms!

uplift → Mountain
Ocean Crust
Pacific Plate
Continental N. American plate
Mantle
Subduction Zone
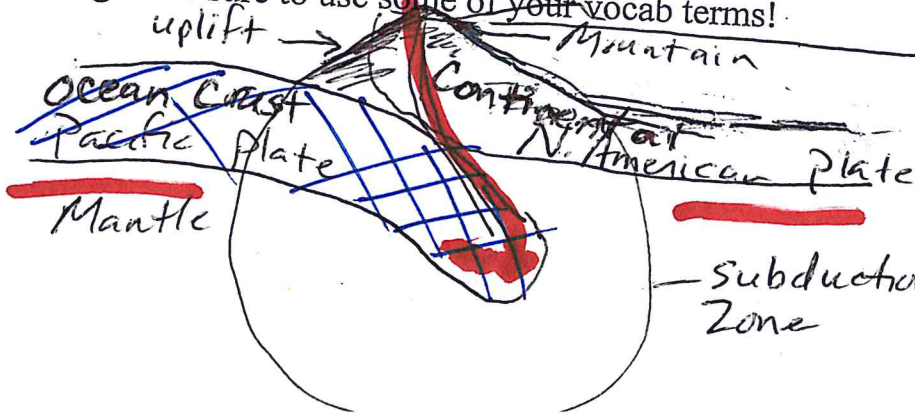
Oceanic plate is Subducted beneath Continental plate when they converge because ocean plate is more dense! Causes mounta...

4. Complete the table below describing the 3 main plate boundary types:

	1	2	3
Plate boundary type:	Convergent	Divergent	Transform
Description of what is happening at this plate boundary.	2 plates are driven towards eachother.	2 plates Many away from eachother.	2 plates Sliding past onehother.
Labeled drawing of plate boundary.			
Actual location where you can find this type of boundary:	- Cascades Ranges - Marrian Trench - Himalayas	- Red Sea - Great Rift Valley - Mid-Atlantic ridge	- San Andreas Fault. - Cascadian fault
Geologic structure(s) formed at this plate boundary	- Mountains - Trench - Subduction Zone - Island archs	- Rift Vallies - Ocean ridges	Faults

Practice Dimensional Analysis Problems: Show all your work using dimensional analysis – don't forget units!!!

5. The average student is in class 330 min/day. How many hours/year is the average student in class?

$$\left(\frac{330\ min}{1\ day}\right)\left(\frac{1\ hr}{60\ min}\right)\left(\frac{365\ days}{1\ year}\right) = \frac{120,450\ hrs}{60\ yrs} \xrightarrow{\text{reduce to}} = \boxed{\frac{2007.5\ hrs}{1\ year}}$$

6. Light can travel 300,000,000 meters per second (m/s). Calculate how fast this is in miles per hour (mi/hr). There are 1.61 km in 1 mile.

$$\left(\frac{300,000,000\ m}{1\ sec}\right)\left(\frac{1\ km}{1000\ m}\right)\left(\frac{1\ mile}{1.61\ km}\right)\left(\frac{60\ sec}{1\ min}\right)\left(\frac{60\ min}{1\ hr}\right) = \frac{1,0800\,000\,000}{1,610\ hr}$$

$$= \frac{670807453.4\ M}{1\ hr}$$

7. On the graph paper below, draw a mountain profile (you choose the starting height!)
   Label the axes Elevation (y axis) and Distance (x axis).
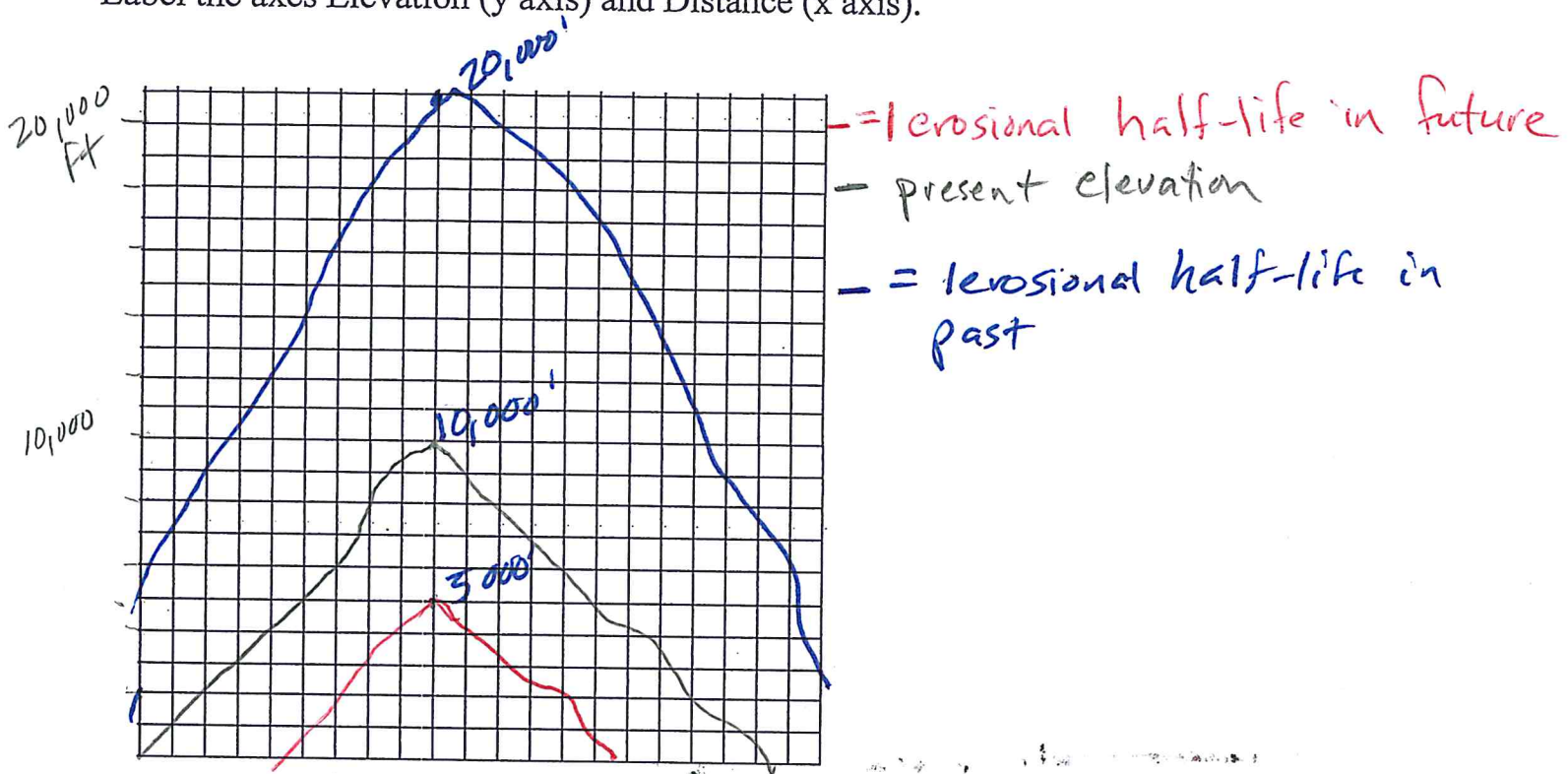
A. Using a different color, draw what the mountain profile would look like in one
   erosional half life. Make sure to label the elevation!
B. Using a third color, draw what the mountain profile would have looked like in one
   erosional half life in the past. Make sure to label the elevation!

Practice Dimensional Analysis Problems:
Show all your work using dimensional analysis – don't forget units!!!
8. The average student is in class 330 min/day. How many hours/year is the average
   student in class?

Repeat

9. Light can travel 300,000,000 meters per second (m/s). Calculate how fast this is in miles
   per hour (mi/hr). There are 1.61 km in 1 mile.

****Also Review the "BUILDING BRIDGES" lesson and make sure you know how to use the
fossil record to identify endemic species and infer plate movements. *****