**Plate Tectonics and Rock Cycle Homework**

1. Fill in AND define the various parts of the Rock Cycle below:
2. Describe, using the terms “lithosphere” and “asthenosphere,” how plate tectonics work.
3. Fill out the information about the three forms of tectonic plate boundaries below:

**Convergent Plate Boundary**

Definition

What Happens

What Forms

Example

Picture

**Divergent Plate Boundary**

Definition

What Happens

What Forms

Example

Picture

**Transform Fault**

Definition

What Happens

What Forms

Example

Picture

1. Describe how a volcanic eruption works, and how it relates to converging tectonic plates. Additionally, explain how we are able to predict volcanic activity, and why it may not be available everywhere.
2. How are earthquakes and volcanoes related?
3. What is the “Ring of Fire,” and where is it located on Earth? Why is this region noteworthy (describe the plate boundary existing here)?
4. How will the shifting of the San Andreas Fault affect the geography of the western US, over time?
5. *Review*: After a period of 72 hours, your sample of Cesium-188 has decayed to 6.25% of its original amount. Calculate the half-life of Cesium-188.
6. *Review*: The half-life of Argon is 30 years. With this information, how long will it take for 150 grams of your original 200.0 gram sample to decay?
7. *Review*: Show the process of Neptunium-256 going through an alpha decay, followed by a beta decay, followed by an additional alpha decay and concluding with a gamma decay. Of all of those decays listed, which is the worst and why?