

Earth Science 110: Introduction to Geology. Exam 1 Review.	
Topics: <ul style="list-style-type: none">• The science of geology• Plate tectonics• Earthquakes• Topographic maps	Reading: Chapters 1, 2, 9
Note: This is NOT intended to provide a comprehensive review. The questions below are examples of the type of questions that you should expect on the exam.	

True or false?

- _____ (1) A plate is a segment of the lithosphere; thus, it includes the uppermost mantle and all of the overlying crust.
- _____ (2) Ocean crust is much thinner than continental crust.
- _____ (3) Most earthquakes in southern California are caused by a subduction zone boundary.
- _____ (4) The deepest parts of the oceans are the trenches located near subduction zones.
- _____ (5) The contour interval on all 1:24,000 topographic maps is 10 feet.

Multiple choice.

- _____ (6) The asthenosphere is
 - (a) hot and plastic
 - (b) mostly liquid magma
 - (c) brittle
 - (d) all of the above
- _____ (7) When a continental plate collides with an oceanic plate,
 - (a) the ocean plate floats above the continental plate
 - (b) the continental plate sinks into the mantle
 - (c) the oceanic plate sinks beneath the continental plate and into the mantle
 - (d) a divergent boundary forms
- _____ (8) A convergent boundary in oceanic crust forms
 - (a) a subduction zone
 - (b) the mid-ocean ridge
 - (c) Iceland
 - (d) Hawaii

_____ (9) A qualitative earthquake scale based on human experience rather than quantitative seismograph measurements is called

- (a) the Mercalli scale
- (b) the Richter scale
- (c) the Andreas scale
- (d) the decibel scale

_____ (10) If an earthquake occurs, the first waves to arrive at a seismograph are the:

- (a) P waves
- (b) S waves
- (c) side-to-side surface waves
- (d) rolling surface waves

_____ (11) On a topographic map, stream valleys can be seen as:

- (a) green areas to show healthy vegetation in wet zones
- (b) blue areas indicating the extent of the active floodplain
- (c) depression contour lines indicated by hachures (small tick marks)
- (d) "Vs" in the contour lines that illustrate the topography of the valley

Calculation (Show all of your work!)

(#12) If a stream measures 4 inches long on a 1:24,000 topographic map, how many miles long is it in reality (on the ground)? [Note: 5,280 feet = 1 mile]