**How Can You Graph an Earthquake ?**

**FINAL ANSWER**

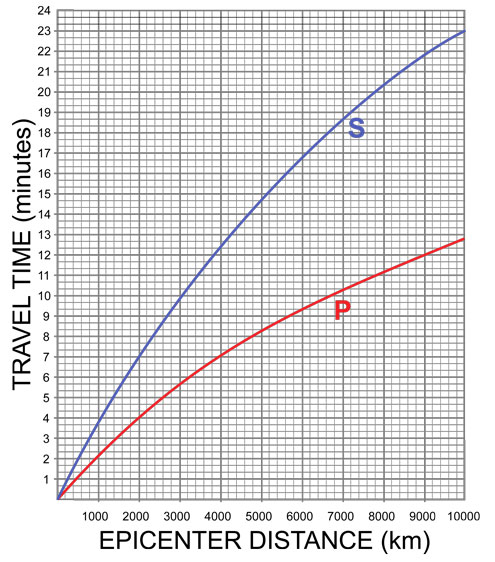
**NAME:**

**CLASS PERIOD:**

1. The region of initiation of seismic energy within the Earth is called the:
   1. epicenter,
   2. hypocenter,
   3. area of greatest building damage
   4. area of least building damage
2. As rupture along a fault initiates, waves of energy travel outward from the hypocenter in a:
   1. linear fashion,
   2. a straight-line path,
   3. a spherical fashion,
   4. none of the above
3. The position on the land surface immediately above the hypocenter is the

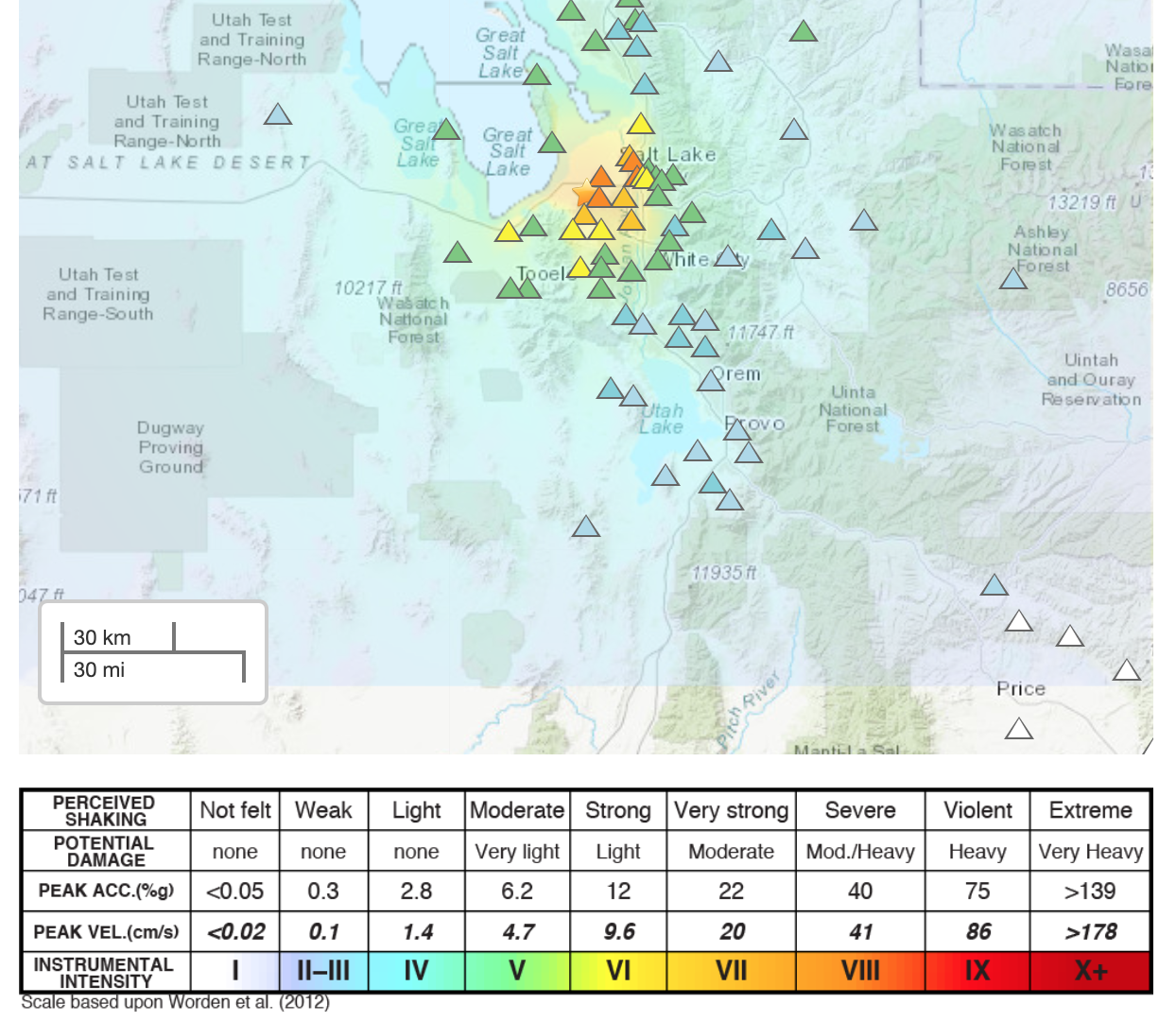
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1. Body waves emanate spherically from the focus traveling:
   1. entirely within the interior of the Earth,
   2. along the surface of the Earth,
   3. within the worlds oceans
   4. into space dude!
2. P-waves produce a series of:
   1. shearing motions that are at right angles to the direction of wave propagation,
   2. contractions and expansions/compressions that are in the direction of wave propagation,
   3. circular motions like an ocean wave
   4. snake-like motions parallel to the Earth's surface
3. S-waves produce a series of:
   1. contractions and expansions that are in the direction of wave propagation,
   2. snake-like motions parallel to the Earth's surface,
   3. circular motions like an ocean wave
   4. shearing motions that are at right angles to the direction of wave propagation
4. At a seismic station the first waves to arrive are .
5. At a seismic station the second waves to arrive are .
6. At a seismic station the last waves to arrive are .
7. A seismograph is a device used to:
   1. sound an alarm,
   2. prevent earthquakes from occurring,
   3. record the vibrations produced during an earthquake
   4. calm the seismologist during an earthquake



Using the Graph on the Left, answer the following questions:

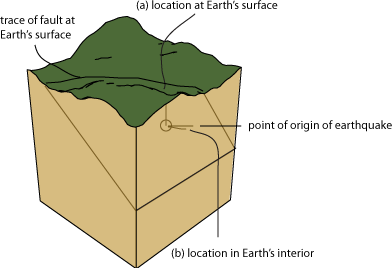
1. How long would it take P-Wave to travel 4000 km?
2. How long would it take the S-Wave to travel 1200 km?
3. What distance did the P-Wave travel in 7 minutes?
4. What distance did the S-Wave travel in 7 minutes?
5. If the S-Wave arrived at a Seismic Station at 4:53:20 p.m. and the P-Wave arrived at the same Seismic Station at 4:50:20 p.m. What is the S-P Interval Time or the Lag Time? Show your work.
6. Once you’ve calculated the S-P Interval Time/Lag Time for this Seismic Station, determine how far away this station was from the Epicenter of the earthquake.
7. From the S-P interval a seismologists can determine the to an earthquake.
8. Given three differently located seismic stations, the time-travel graph can be used to determine the position of the .
9. Each unit increase in magnitude on the Richter scale corresponds to an increase in seismic wave amplitude of -fold?
10. Looking at the Severity Map of the Magna Earthquake that happened recently in Utah, what level of severity did Price experience the Earthquake?
11. Looking at the Severity Map of the Magna Earthquake, what level of severity was felt by the fish in the Great Salt Lake?



1. In the following illustration what do you call location (a) and location (b)? Finish the sentences below.

Location A is

Location B is



1. In the following illustration what is happening at (a) and at (b)? What are the names of the waves that follow the Body Waves? Finish the following sentences:

A is when

B is when

C is when

