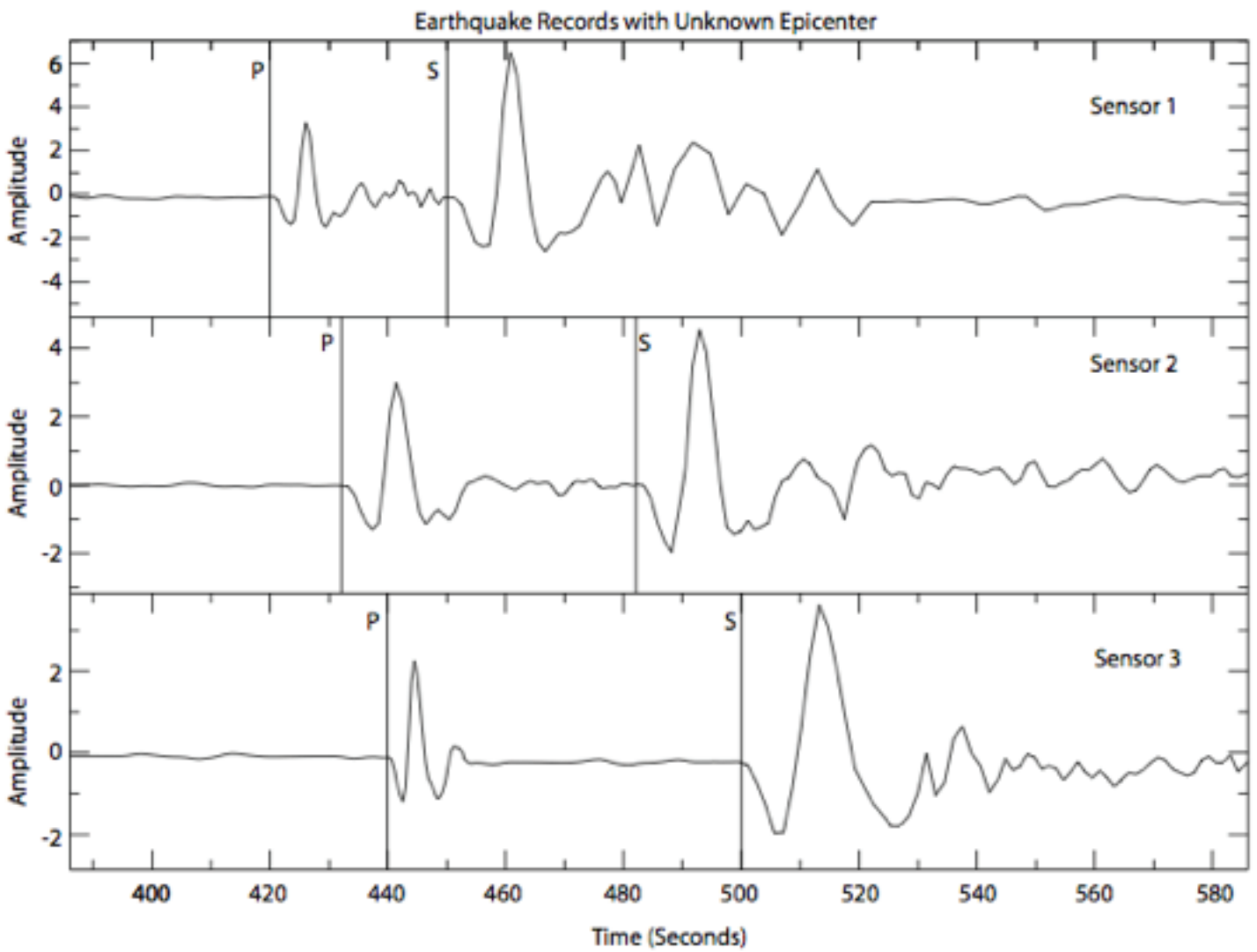


Seismic data:



Data: Table 1:

	Arrival time of the p-waves	Arrival time of the s-waves	Difference in time between the p- and s-waves	Difference in time x 8 km/sec	Distance of epicenter from station (km)
Station 1 (sensor 1)				x 8	
Station 2 (sensor 2)				x 8	
Station 3 (sensor 3)				x 8	

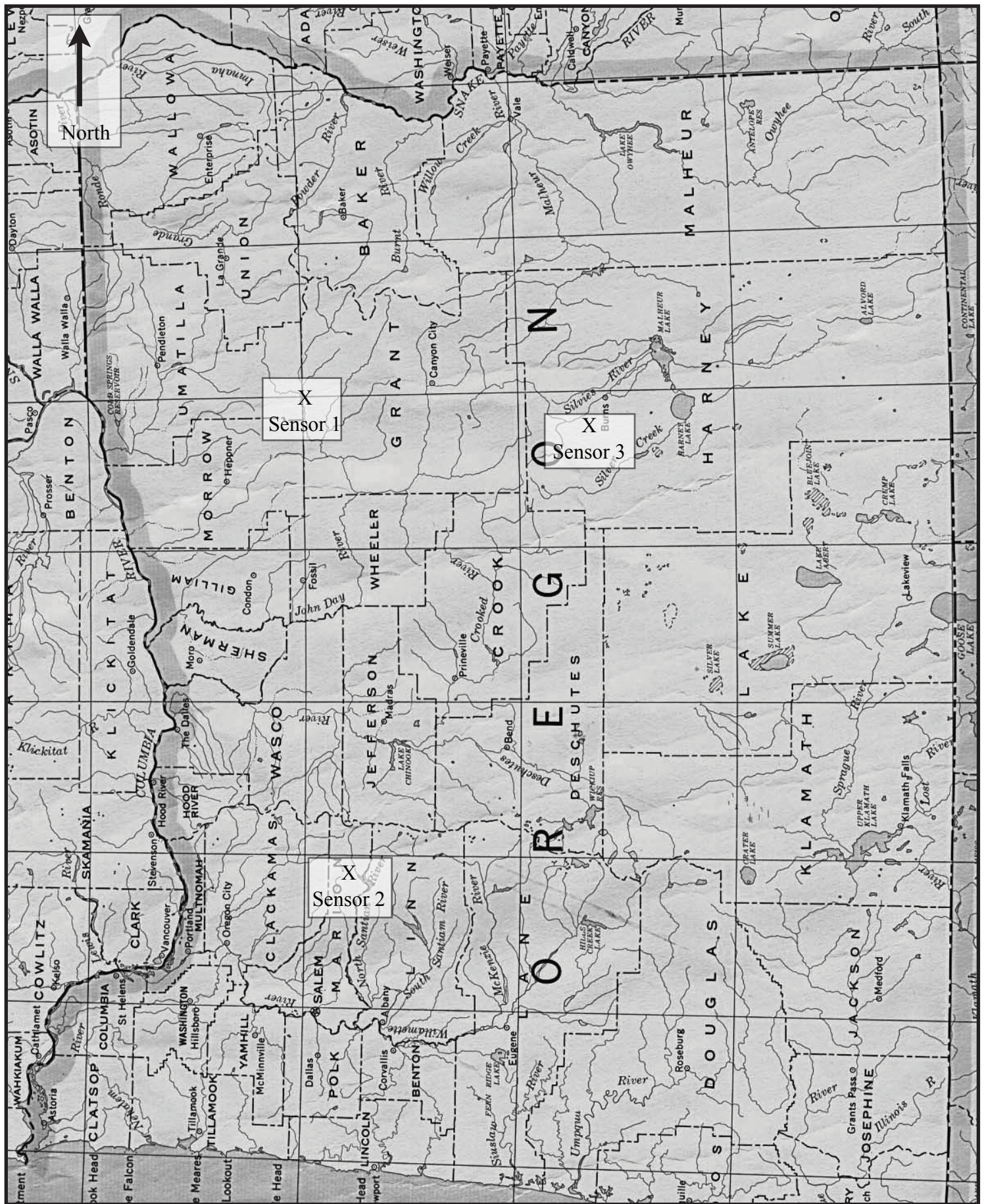
Table 2:

Using the distance from the epicenter to the station (table 1), calculate the radius in inches of each circle. Do not round any of your answers.

	Distance of epicenter from station (km)	Convert distance to inches (150 km = 1 in)	Radius of the circle (inches)
Station 1 (sensor 1)		÷ 150	
Station 2 (sensor 2)		÷ 150	
Station 3 (sensor 3)		÷ 150	

Analysis questions:

- How are earthquakes produced?
- What drives plate tectonics?
 - What is the source of energy? (*Look at your response to question 2. What produces the energy to create the driving force for plate tectonics?*)
- Can the exact location of an epicenter be located by only 1 seismic station? Thoroughly explain.
- Can the exact location of an epicenter be located by 2 seismic stations? Thoroughly explain.
- Can scientists predict when an earthquake or volcanic eruption will occur? Thoroughly explain. (*predict: provide advanced warning that an event will occur*)
- Which type of seismic wave travels faster through Earth's crust and is bent by the inner core?
- Which type of seismic wave cannot pass through a liquid, and is confined only to the crust and mantle?
- Which type of seismic wave cannot pass through Earth's interior?



Triangulation of an epicenter 3