REGENTS EARTH SCIENCE
Plotting Epicenter Worksheet

Name: _____

Part I. The data below shows the P- and S-wave arrival time difference determined from seismograms from three different cities, for three different earthquake events. Use your travel time curve to determine the distance to epicenter for each city/earthquake.

EARTHQUAKE 1

CITY	DIFFERENCE IN ARRIVAL TIME OF P AND S WAVES	DISTANCE TO EPICENTER DETERMINED FROM TRAVEL TIME CURVE
SEATTLE	1:50	km
DENVER	2:30	km
HOUSTON	4:00	km

EARTHQUAKE 2

CITY	DIFFERENCE IN ARRIVAL TIME OF P AND S WAVES	DISTANCE TO EPICENTER DETERMINED FROM TRAVEL TIME CURVE
DENVER	2:25	km
HOUSTON	4:10	km
MIAMI	5:40	km

EARTHQUAKE 3

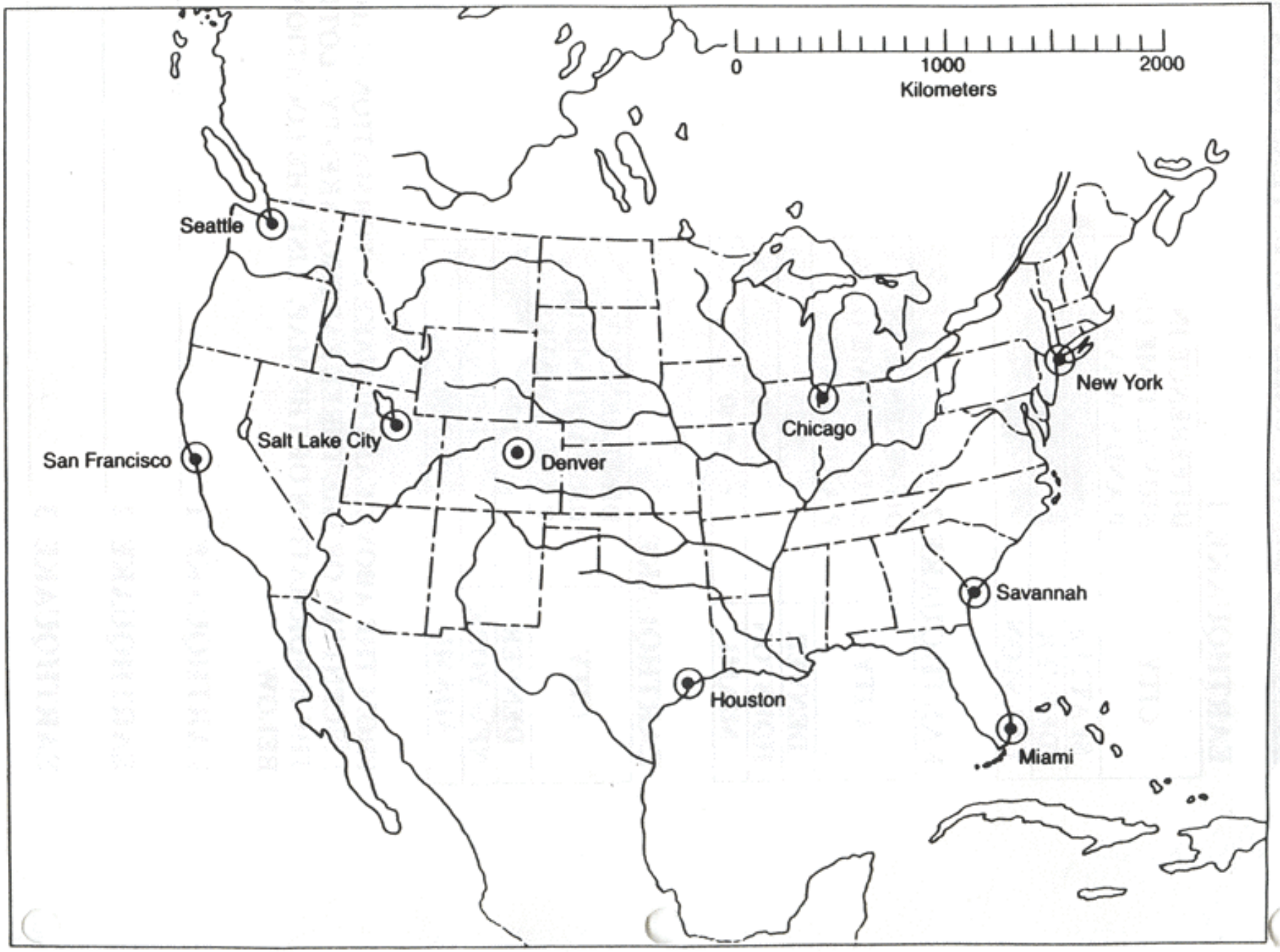
CITY	DIFFERENCE IN ARRIVAL TIME OF PANDSWAVES	DISTANCE TO EPICENTER DETERMINED FROM TRAVEL TIME CURVE
DENVER	2:20	km
NEW YORK	1:50	km
MIAMI	3:00	km

Part II. Using the distance to epicenter information above, the map, and the map scale, plot the location of each earthquake. This can be done by drawing circles with the appropriate radius around the cities of record, and identifying where the circles intersect. **Be careful to complete one earthquake entirely before moving on to the next!** Finally, record the epicenter location for each earthquake below by identifying the closest city, and describing the direction N, S, E or W of that city.

EARTHQUAKE 1: _____

EARTHQUAKE 2: _____

EARTHQUAKE 3: _____


0
1000
2000
Kilometers
Seattle
San Francisco
Salt Lake City
Denver
Chicago
New York
Savannah
Houston
Miami