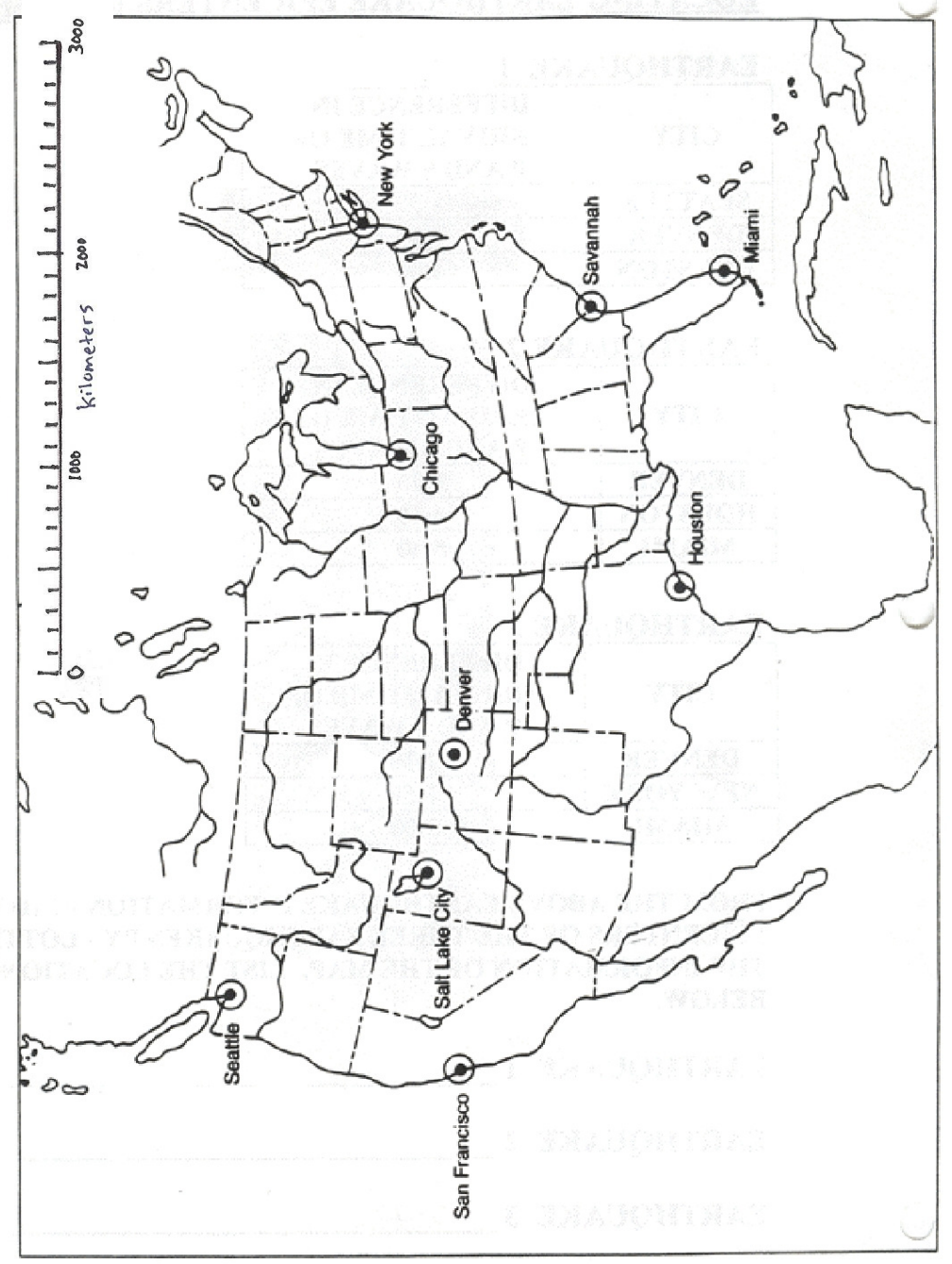
Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

MORE EPICENTER PRACTICE

Practice drawing Possible Epicenter Locations (Circles)

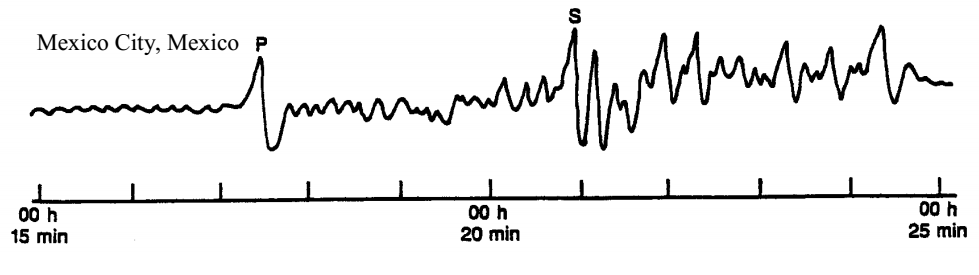
|  |  |
| --- | --- |
| City | Distance |
| Miami | 500 km |
| Seattle | 300 km |
| Houston | 2000 km |
| Denver | 1,400 km |
| Chicago | 250 km |
| NY | 600 km |
| Savannah | 1,100 km |

*This is to practice drawing circles you will NOT find the EPICENTER!!*

Use the difference in arrival times below to determine the epicenter distances.

|  |  |  |
| --- | --- | --- |
| Location | Difference in Arrival Times  (min & sec) | Epicenter Distance (km) |
| San Diego | 2:20 |  |
| Chicago | 4:40 |  |
| Seattle | 3:30 |  |
| New York | 5:00 |  |
| Boston | 1:50 |  |
| Wink | 3:10 |  |

Determine the scale (how much each line is worth & the Difference in Arrival Times for each seismogram below.



Scale: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

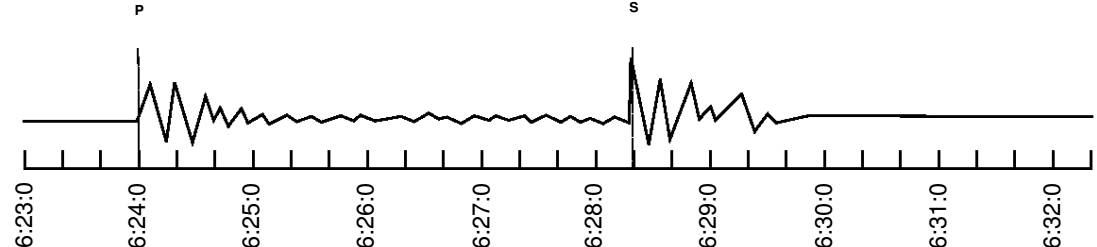
Difference in Arrival Time:

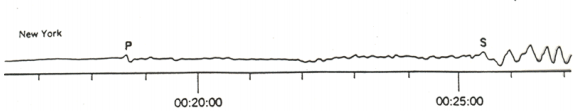
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Scale: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Difference in Arrival Time:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_





Scale: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

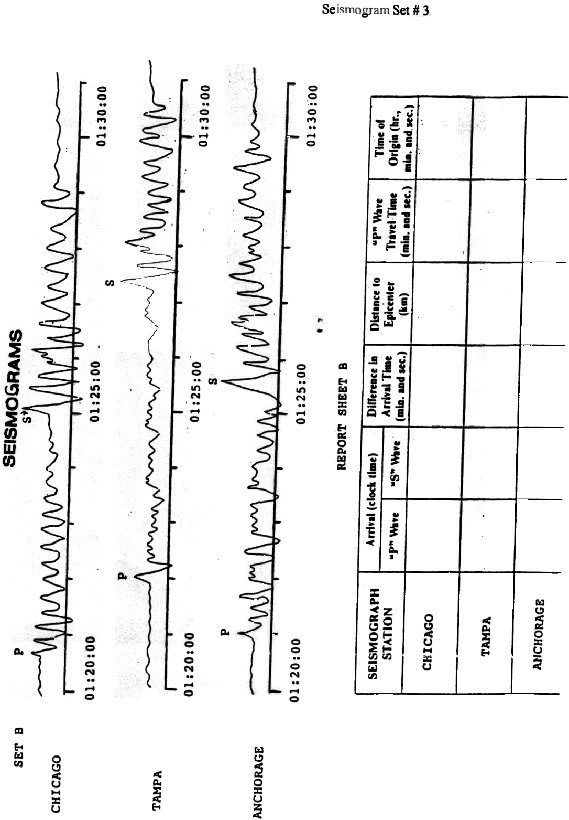
Difference in Arrival Time:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Scale: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Difference in Arrival Time:

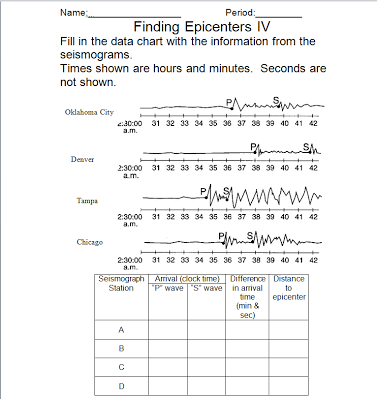
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[](https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjT55Hy1p_UAhVDLyYKHW-FARQQjRwIBw&url=https://docushare.edutech.org/dsweb/GetRepr/Document-13539/html&psig=AFQjCNG87b0fg9YhTptErQk4WOKogiaC7A&ust=1496510683147044)

Scale: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

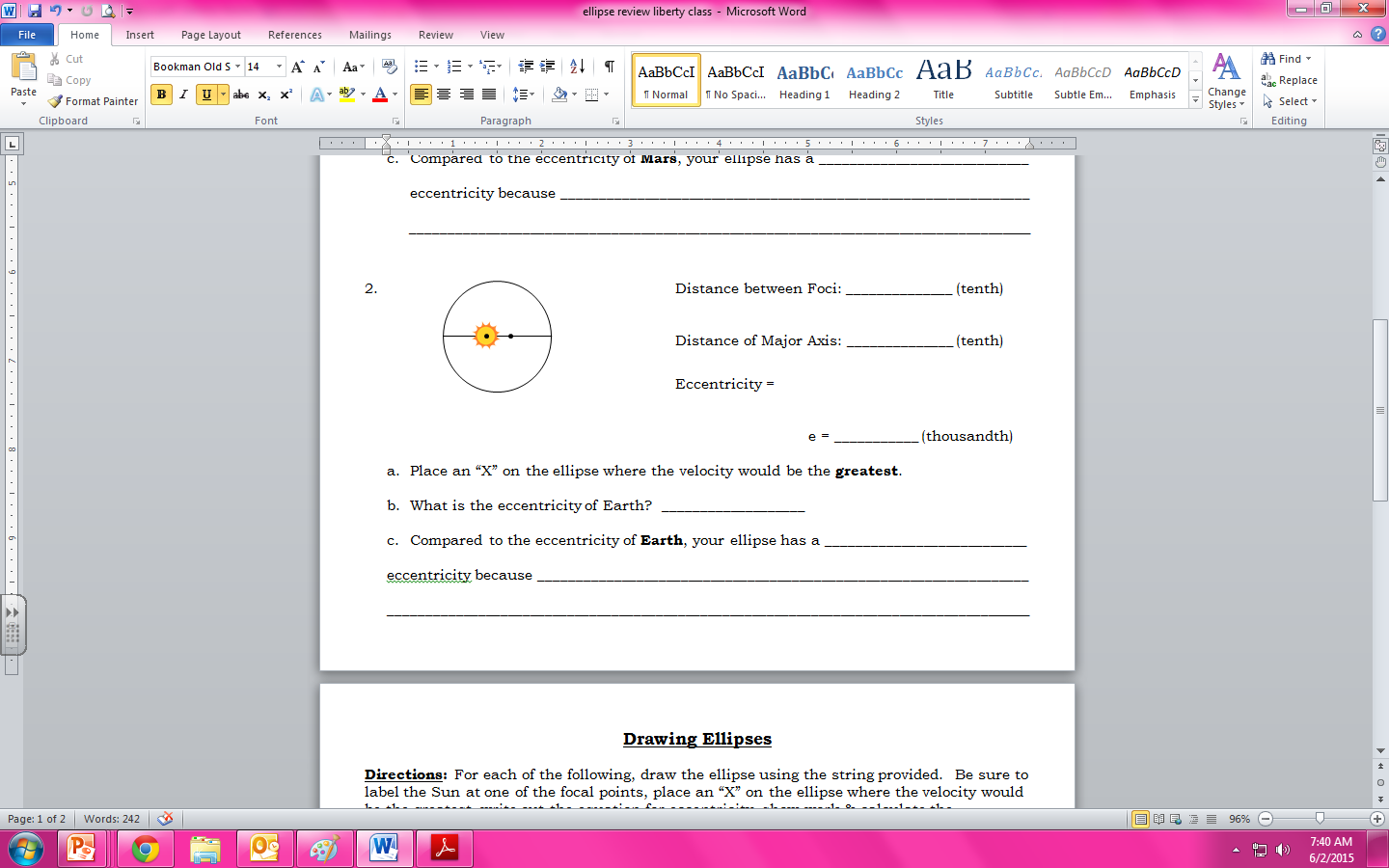
Difference in Arrival Time:

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

[](https://www.google.com/url?sa=i&rct=j&q=&esrc=s&source=images&cd=&cad=rja&uact=8&ved=0ahUKEwjP7KSa2J_UAhWH7BQKHY3IAEMQjRwIBw&url=https://sites.google.com/a/ecsdm.org/sites-google-com-a-ecsdm-org-mrs-karaffa-s-regents-earth-science/labs&psig=AFQjCNFt1DHULl1CERgaMnnXOl8x43oyfQ&ust=1496511025009448)

**Calculating Eccentricity**

**Directions:** Calculate the eccentricity of the ellipses below. For each, label the Sun at one of the focal points, be sure to write out the equation, show work & round the eccentricity of the ellipse to the nearest thousandth.



Distance between Foci: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (tenth)

Distance of Major Axis: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (tenth)

Formula for Eccentricity & work:

e = \_\_\_\_\_\_\_\_\_\_ (thousandth)

1. Place an “X” on the ellipse where the velocity would be the **greatest**.
2. What is the eccentricity of Earth? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Compared to the eccentricity of **Earth**, your ellipse has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

eccentricity because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

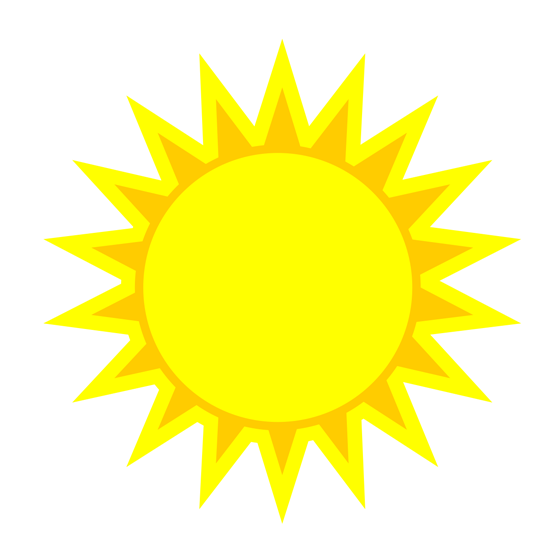
\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

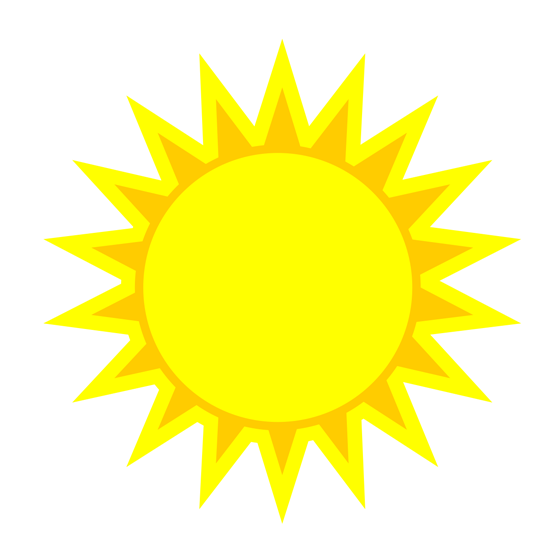
Distance between Foci: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (tenth)

Distance of Major Axis: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (tenth)

Formula for Eccentricity & work:

e = \_\_\_\_\_\_\_\_\_\_ (thousandth)



Rocks & Minerals Review

1. Place an “X” on the ellipse where the velocity would be the **greatest**.
2. What is the eccentricity of Earth? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Compared to the eccentricity of **Earth**, your ellipse has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

eccentricity because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

1. Place an “X” on the ellipse where the velocity would be the s**lowest**.
2. What is the eccentricity of Mars? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. Compared to the eccentricity of **Mars**, your ellipse has a \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ eccentricity because \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Distance between Foci: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (tenth)

Distance of Major Axis: \_\_\_\_\_\_\_\_\_\_\_\_\_\_ (tenth)

Formula for Eccentricity & work:

e = \_\_\_\_\_\_\_\_\_\_ (thousandth)

|  |  |
| --- | --- |
| Rock Type | Observable Characteristics |
| Igneous Rocks |  |
| Sedimentary Rocks |  |
| Metamorphic Rocks |  |

Cleavage or Fracture?

|  |  |
| --- | --- |
|  |  |
| Cleavage OR Fracture | Cleavage OR Fracture |
|  |  |
| Cleavage OR Fracture | Cleavage OR Fracture |
|  |  |
| Cleavage OR Fracture | Cleavage OR Fracture |

Igneous, Sedimentary or Metamorphic & WHY?

|  |  |
| --- | --- |
|  |  |
| Igneous OR Sedimentary OR Metamorphic | Igneous OR Sedimentary OR Metamorphic |
| WHY? | WHY? |
|  |  |
| Igneous OR Sedimentary OR Metamorphic | Igneous OR Sedimentary OR Metamorphic |
| WHY? | WHY? |
|  |  |
| Igneous OR Sedimentary OR Metamorphic | Igneous OR Sedimentary OR Metamorphic |
| WHY? | WHY? |