**Purple Complete the following questions using complete sentences with a restate.**

1. Do the Xs make a pattern across the table? What would you conclude if there was an X outside the pattern?(2)

2. Based on the information in your table, which fossil is the youngest?(1)

3. From the information you have, are you able to tell exactly how old a certain fossil is? Why or why not?(2)

4. What information does relative dating provide to paleontologists?(1)

5. You are planning to prepare a timeline for the paleontologist in California. But when the results, shown below, come in from the geology lab, you discover the dates have become separated from the appropriate rock samples. Absolute dating is very expensive, and you can’t have it done again. But wait! You have already determined the relative ages of the samples. All you have to do is arrange the dates from oldest to youngest and label your table from bottom to top. Add these dates to your data table. (2)

The dates provided by the geology lab are as follows:

 28.5 mya, 30.2 mya, 18.3 mya, 17.6 mya, 26.3 mya, 14.2 mya, 23.1 mya, 15.5 mya and 19.5 mya.

6. Based on absolute dating, which fossil organism lived for the longest period of time? Which fossil organisms lived for the shortest period of time? Explain your answers.(3)

7. Based on the information you have, what age range would you assign to the fossil Circus Bozoensis? Hint: Measure from the year that the fossil first appeared in the rock record to the first year it was absent in the rock record.(1)

8. Determine and list the age ranges of all your fossil species (3)

\*\* Extra Credit\*\*

1. Your data table contains all the information you need to make a timeline for the Paleontologist in California. Used coloring utensils and construction paper to make a timeline. Draw a rock wall showing several layers and label each layer with a date and the names of the fossils found there. You can either draw or cut and paste the fossil samples into your rock layers. (remember I like color and creativity!!)
2. Using the library or the internet, investigate whether absolute dating of rock surrounding fossils is the most reliable method of dating. Find out what circumstances prevent absolute dating.