

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

Class: \_\_\_\_\_

## Distance and Midpoint Formulas

$$\text{Midpoint} = \left( \frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

$$\text{Distance} = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

You are planning a trip through at least ten states in the USA. Use a friend, relative, or internet to pick 5 locations you want to visit such as the Grand Canyon, AZ. These will be the locations you stop each day. Find their approximate locations on the map. Using the coordinate plane, find:

1. The distance traveled **each day**.
2. The total distance you will travel if you went straight from beginning to end without the other stops.
3. You need to stop in the middle of each day of travel to get gas, stretch, and use the restroom. Find the **coordinates** and **state** of the midpoint of your travel each day.

