

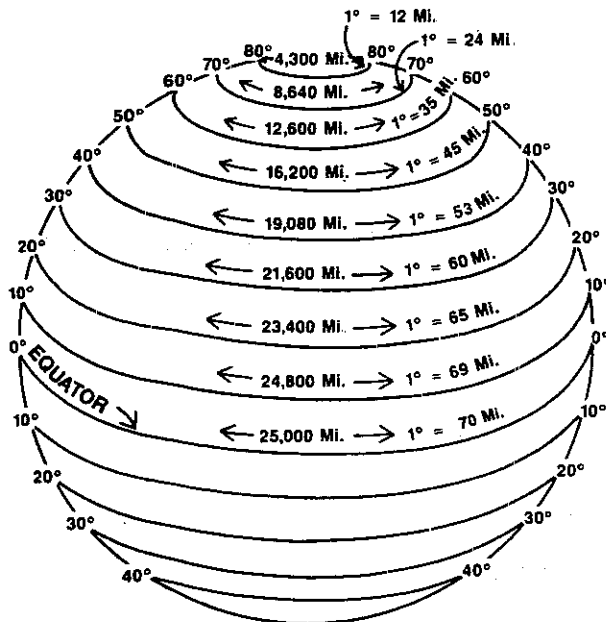
Name _____ Date _____

USING LATITUDE AND LONGITUDE TO MEASURE DISTANCES EAST AND WEST—NORTH AND SOUTH

The equator is 25,000 miles long. However, not all lines of latitude are the same distance around the Earth. This is because the lines of latitude get shorter and shorter as they approach the North and South Poles. For example, the 30°N line and the 30°S line are about 21,600 miles long. If we divide 21,600 by 360°, we find that one degree equals 60 miles.

The diagram below shows the number of miles in one degree of longitude on certain lines of latitude.

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Practice in Finding Distances on Various Lines of Latitude

Use the diagram at the top of the next column to find the answers to the following questions.

1. How many miles is it from A to B? Answer: A degree on the 50°N line of latitude is 45 miles. There are 30° between A and B, so, $30^\circ \times 45 \text{ miles} = 1,350 \text{ miles}$.

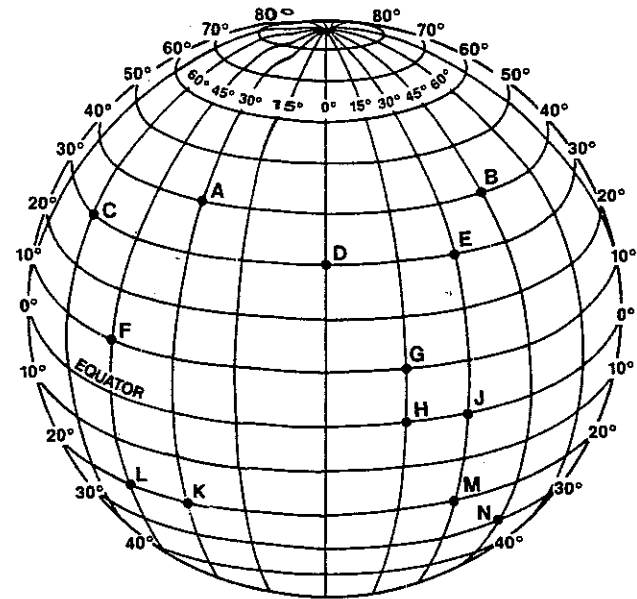
2. How many miles is it from:

a. C to D? _____

b. K to L? _____

c. F to G? _____

d. M to K? _____



Finding Distances on Lines of Longitude

Just as the equator is about 25,000 miles around, so are all the lines of longitude. Therefore, every degree of latitude on a line of longitude is about 70 miles.

On the map above there are 10° of latitude between G and H. To find the distance in miles between these two places simply multiply $10^\circ \times 70 \text{ miles}$, or 700 miles.

Complete the table below so that it will show the distances between places on the diagram.

Places	Number of Line of Longitude	Distance in Miles
F to L		
A to K		
G to H		
E to M		
B to N		