Indiana by Coordinates

Locate Indiana places using latitude, longitude, and global reference lines.

IS.3.1 "Use latitude and longitude to identify physical and human features of Indiana understanding their locational importance relative to significant Earth features (equator, prime meridian, International Date Line)."

NAME _____ DATE _____

1 READ AND MARK

Read it twice

YOUR JOB Underline each place and its coordinates, then circle every reference to the equator, prime meridian, or International Date Line. Use your marks to compare where the places are.

Three Stops Across Indiana

1. Imagine planning a trip across Indiana using only coordinates. Latitude measures distance north or south of the equator, at 0°. Longitude measures distance east or west of the prime meridian, at 0°. Indiana lies north of the equator and west of the prime meridian. On a globe, the International Date Line runs mostly near 180° longitude, across the Pacific Ocean, but it bends around some places. Indiana's longitudes are about 85° W to 88° W, far from that line. Each degree of latitude represents roughly 111 kilometers along Earth's surface.

2. At Indiana Dunes National Park, near 41.65° N, 87.05° W, sandy ridges meet the southern shore of Lake Michigan. The coordinates place this physical feature in northern Indiana, where the lake influences local weather and provides habitat for plants and birds. Indianapolis, a city and the state capital, sits near 39.77° N, 86.16° W. Its latitude is lower than the dunes' latitude, while its longitude is farther east. Knowing both numbers matters: a traveler using latitude alone could miss the capital by many kilometers along the same east-west band.

3. Evansville, a city on the Ohio River, lies near 37.97° N, 87.57° W. The river forms part of Indiana's southern border, so Evansville's latitude helps show why the city is near the state's southern edge. The river also links communities through shipping and recreation. To compare Evansville's longitude with global reference lines, measure its angular distance from 0° and from 180°. The International Date Line generally follows the 180° meridian, though it bends. These distances describe positions on a globe, not the length of a travel route between places.

2 ANSWER WITH EVIDENCE

Use the passage

1. Which is farther from the equator, Indiana Dunes National Park or Indianapolis? By how many degrees of latitude?

2. Using their longitudes, is Indianapolis east or west of Indiana Dunes National Park? By about how many degrees?

3. Use both coordinates to describe where Evansville lies relative to Indianapolis.

4. Which is closer in degrees of longitude to Evansville, the prime meridian or the 180° meridian near the International Date Line? Show both distances.

3 YOUR TURN

Your own words

A new field station is proposed at 40.50° N, 86.50° W. Write three or four sentences locating it relative to Indianapolis and Indiana Dunes National Park, then explain its position relative to the equator, prime meridian, and International Date Line.

ANSWER KEY

Indiana by Coordinates

HIGH SCHOOL · IS.3.1

PART 1 · READ AND MARK

Underline each place and its coordinates, then circle every reference to the equator, prime meridian, or International Date Line. Use your marks to compare where the places are. Accept any marking that follows this job and points at the right text.

PART 2 · ANSWERS

#	QUESTION	ANSWER
1	Which is farther from the equator, Indiana Dunes National Park or Indianapolis? By how many degrees of latitude?	**Indiana Dunes National Park is farther north and thus farther from the equator by 1.88° of latitude.**
2	Using their longitudes, is Indianapolis east or west of Indiana Dunes National Park? By about how many degrees?	**Indianapolis is east of the dunes by about 0.89° of longitude.**
3	Use both coordinates to describe where Evansville lies relative to Indianapolis.	**Evansville is south and west of Indianapolis.**
4	Which is closer in degrees of longitude to Evansville, the prime meridian or the 180° meridian near the International Date Line? Show both distances.	**The prime meridian is closer. Evansville is 87.57° from 0° and 92.43° from 180°.**

PART 3 · YOUR TURN (SAMPLE ANSWER)

The field station is north and west of Indianapolis but south and east of Indiana Dunes National Park. Its latitude puts it north of the equator, and its longitude puts it west of the prime meridian. At 86.50° W, it is closer in longitude to the prime meridian than to the 180° meridian near the International Date Line.

Accept rounded differences in degrees. For the field station, require correct directions relative to both places and all three global references.