



## Introduction to Latitude and Longitude

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*Read the following introduction and answer the questions that follow:*

Latitude and longitude are two fundamental concepts in geography that help us navigate and understand the world. Latitude measures the distance north or south of the Equator, while longitude measures the distance east or west of the Prime Meridian.

1. What is the main purpose of latitude and longitude in geography?

2. What is the difference between latitude and longitude?

## Understanding Latitude

*Read the following information and complete the exercises:*

Latitude is measured in degrees, minutes, and seconds, ranging from  $0^{\circ}$  to  $90^{\circ}$  north or south of the Equator. The Equator is an imaginary line that divides the Earth into the Northern Hemisphere and the Southern Hemisphere.

1. What is the latitude of the North Pole?

2. What is the latitude of the South Pole?

3. What is the latitude of the Equator?

## Understanding Longitude

*Read the following information and complete the exercises:*

Longitude is also measured in degrees, minutes, and seconds, ranging from  $0^{\circ}$  to  $180^{\circ}$  east or west of the Prime Meridian. The Prime Meridian passes through Greenwich, England, and is used as a reference point for measuring longitude.

1. What is the longitude of the Prime Meridian?

2. What is the longitude of a location that is  $30^{\circ}$  east of the Prime Meridian?

3. What is the longitude of a location that is  $45^{\circ}$  west of the Prime Meridian?



## Relation to Time Zones

*Read the following information and complete the exercises:*

Time zones are determined by longitude, with each time zone representing a one-hour difference from Coordinated Universal Time (UTC). There are 24 time zones in total, each covering approximately 15° of longitude.

1. If it is 12:00 PM (noon) in New York, what time is it in Los Angeles, which is 3 hours behind New York?

2. If it is 9:00 AM in London, what time is it in Tokyo, which is 9 hours ahead of London?

3. What is the time zone of a location that is 90° east of the Prime Meridian?

## Practical Applications

*Read the following information and complete the exercises:*

Latitude and longitude have numerous practical applications, including navigation, meteorology, and global communication.

1. How do pilots use latitude and longitude to navigate?

2. How do meteorologists use latitude and longitude to predict weather patterns?

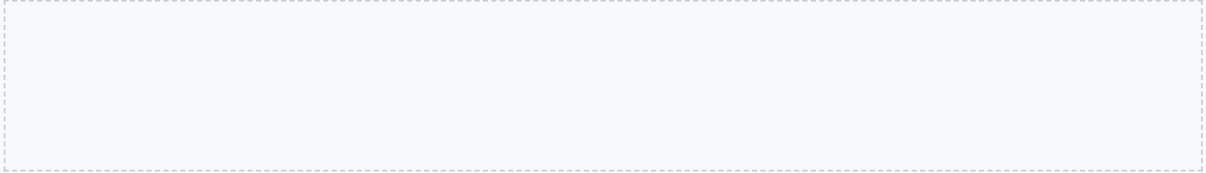
3. How do people use latitude and longitude to communicate with others across the globe?




## Activities and Questions

*Complete the following activities and questions:*

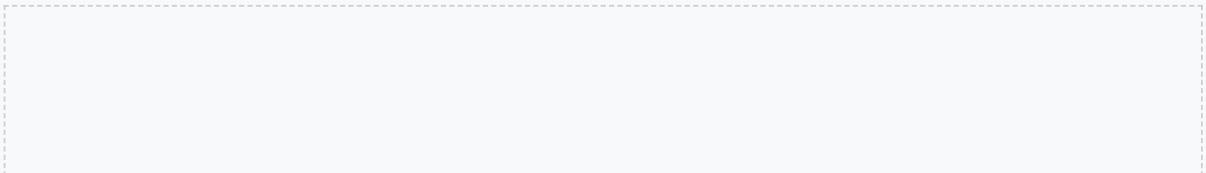
1. Mark the Equator and the Prime Meridian on a world map.



2. Identify the latitude and longitude of your hometown.

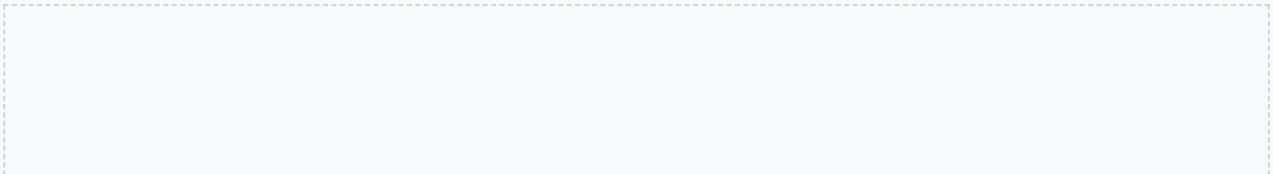


3. Calculate the time difference between two cities in different time zones.



## Research and Presentation

*Research and present on a country or region, discussing its time zone, cultural practices, and how time zone differences affect daily life and international interactions.*



## Conclusion

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*Read the following conclusion and answer the questions that follow:*

In conclusion, understanding latitude and longitude is essential for navigation, global awareness, and communication. By applying these concepts, we can better appreciate the world's geography and cultures.

1. What is the main purpose of understanding latitude and longitude?

2. How can latitude and longitude be applied in real-life scenarios?

## Additional Resources

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*Use the following resources to further your understanding of latitude and longitude:*

- World map
- Globe
- Online mapping tools
- Geography textbooks
- Educational websites

