

Telling Time (cont'd)

9/25 B

As you head West it gets EARLIER (subtract time)

ex. 4pm NY = 1pm CA

As you head East it gets LATER (add time)

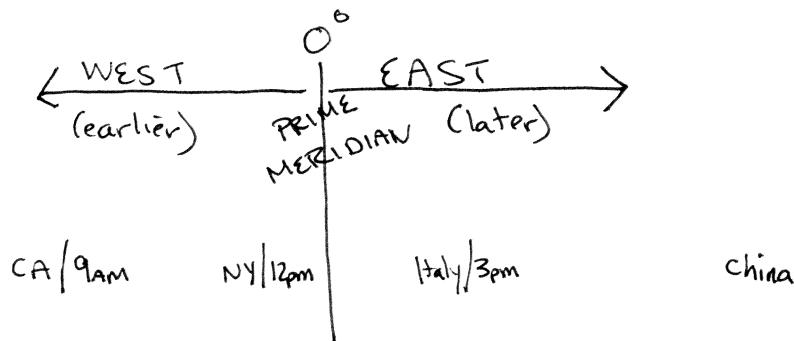
ex. 4pm CA = 7pm NY

(Monday night football occurs in afternoon in West coast) \*

Handout: How to determine your longitude?

Time Zones Practice sheet:

People on the same line of longitude have the same Time



Handout: Longitude/Time Zones Practice sheet

- Locations 30° apart have a 2 hour time difference
- Locations 4 hours apart are  $4 \text{ hr} \times \frac{15^\circ}{\text{hr}} = 60^\circ$  apart
- It is 1pm at your location when it is 4pm at the Prime Meridian.  
You are:  $4 \text{ pm} - 1 \text{ pm} = 3 \text{ hr away (earlier)} = \boxed{45^\circ \text{ W}}$

## Aim: Telling Time

9/25

Why do we have different time zones?

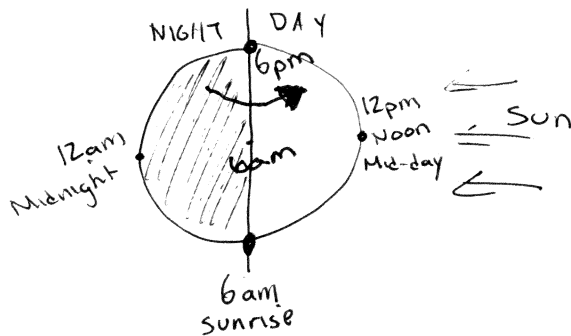
Bordi  
Cipriano  
Brighton

- Time zones are based on the position of the Sun and the Rotation of the Earth.

- We want the Sun at Solar Noon around 12:00 pm Noon  
Solar Noon - The highest point for the Sun

animation - Rotating Earth

Sun rises East (later) + Sets in the West.



$$\text{Earth rotates } 360^\circ/\text{DAY} = \frac{360^\circ}{24\text{hrs}} = \boxed{\frac{15^\circ}{\text{hour}}}$$

Earth rotates  $15^\circ/\text{hour}$

Every  $15^\circ =$  A new time zone (1 hour)

Time is based on longitude lines.

Same longitude lines = same time