

Background Information on Times Zones

A day is the time it takes the Earth to spin around once on its axis. An hour is one twenty-fourth a day, so the Earth is divided into 24 standard time zones, each covering approximately 15 degrees of longitude. The time of day depends on where you are on the Earth. Hours are numbered from the Prime Meridian, or 0 degrees longitude, which passes through Greenwich, England. Time zones east of the Greenwich zone are ahead of Greenwich time. This is because the Earth spins toward the east, so that lands in the east get the sun earlier than Greenwich does. Time zones west of Greenwich are behind Greenwich time. They get the sun later than Greenwich. The boundaries of the time zones usually follow straight lines over the oceans. Every fifteenth degree of longitude marks a different time zone. On the continents, time zone boundaries usually zigzag. Some countries are so large that they cover more than one time zone. Russia stretches across 11 time zones. From the state of Maine to the state of Hawaii, the United States spreads across 7 time zones.

To determine what time it is in another time zone, you must add or subtract, depending on whether you are going east or west. First, determine the time for the time zone in which you live. Next, find the time zone you want and count how many time zones away it is from yours. Now, determine if the new time zone is east or west of where you live. If it is east, add one hour for each time zone away it is from your time. If it is west, subtract one hour for each time zone away it is from your time. For example, if it is 8 A.M. where you are and you go 3 time zones east, you add 3 to 8 and get 11 A.M. in the new time zone. If it is west, it would be 8 subtract 3 for a time of 5 A.M. Using this simple formula will enable you to always know what time it is.

Time Zones Practice Sheet

Name _____

Directions: Use your time zone map to answer these questions.

1. The world is divided into how many times zones?
2. How many degrees of longitude is each time zone?
3. When going east, do you add or subtract one hour for each time zone through which you travel?
4. When going west, do you add or subtract one hour for each time zone through which you travel?
5. You are in Time Zone I. What time is it according to the map?
6. You live in Time Zone G. Your friend lives in Time Zone K. How many hours difference is there?
7. You live in Time Zone I. You want to call Time Zone D. How many hours difference is there?
8. If it is 6 P.M. in Time Zone F, what time is it in Time Zone M?
9. If it is 9 P.M. in Time Zone U, what time is it in Time Zone P?
10. You live in Time Zone H. Your friend lives in Time Zone O. If it is 2 P.M. in Time Zone H, what time is it at your friend's house?

Time Zone Assessment

Name: _____

Directions: Using the time zone map, circle the letter of the best answer.

1. The world consists of how many time zones?
 - a. 7
 - b. 365
 - c. 24
 - d. 12

2. Each time zone is how many degrees of longitude?
 - a. 15
 - b. 24
 - c. 1
 - d. 60

3. When going west, you subtract one hour for each time zone through which you pass.
 - a. true
 - b. false

4. When going east, you subtract one hour for each time zone through which you pass.
 - a. true
 - b. false

5. According to the map, the time in Time Zone R is:
 - a. 4 P.M.
 - b. 3 A.M.
 - c. 5 A.M.
 - d. 4 A.M.

6. You are in Time Zone D and your friend is in Time Zone M. What is the time difference between you and your friend?
 - a. 10 hours
 - b. 9 hours
 - c. 8 hours
 - d. 11 hours

More on the back.....

7. China is in Time Zone U. London is in Time Zone N. What is the time difference between these two zones?
 - a. 0 hours
 - b. 6 hours
 - c. 7 hours
 - d. 8 hours

8. Athens, the site for the 2004 Summer Olympics, is in Time Zone P. If an event begins at 2 P.M. in Athens, what time will it be in New York, which is in Time Zone I?
 - a. 7 A.M.
 - b. 9 A.M.
 - c. 7 P.M.
 - d. 9 P.M.

9. Juan, who lives in Madrid (Time Zone N), wants to call his pan pal, Yoshi, in Tokyo (Time Zone X). If it is 9 A.M. in Madrid, what time is it in Tokyo?
 - a. midnight
 - b. 7 P.M.
 - c. 9 A.M.
 - d. 9 P.M.

10. The Phoenix Suns have a game in Anchorage, Alaska. If the game begins at 8 P.M. Anchorage time (Time Zone D) and is broadcast live in Phoenix (Time Zone G), what time would the game begin in Phoenix?
 - a. 10 P.M.
 - b. 5 P.M.
 - c. 2 P.M.
 - d. none of the above

Answer Key for Time Zone Practice

1. 24
2. 15
3. add
4. subtract
5. 7 P.M.
6. 4 hours
7. 5 hours
8. 1 A.M.
9. 4 P.M.
10. 9 P.M.

Questions 1-5 assess geography and questions 6-10 assess math.

Mastery for geography is 4 or more questions correct. Mastery for Math is 4 or more questions correct.

Answer Key for Time Zones Assessment

1. C
2. A
3. A
4. B
5. D
6. B
7. C
8. A
9. B
10. A

Questions 1-5 assess geography and questions 6-10 assess math.

Mastery for geography is 4 or more questions correct. Mastery for math is 4 or more questions correct.