

World Tour



Introduction

About the World Tour

For the rest of the school year, you and your classmates will go on an imaginary tour of the world. As you visit various countries, you will learn about the customs of people in other parts of the world. You will practice globe and map skills to help you locate the places you visit. As you collect and examine numerical information for the countries you visit, you will have many opportunities to apply your knowledge of mathematics.

How the World Tour Is Organized

You will first fly from your hometown to Washington, D.C. The class will then visit five regions of the world: Africa, Europe, South America, Asia and Australia, and, finally, North America.

The class will first visit the continent of Africa, landing in Cairo, Egypt. From there, you will fly to the second region, Europe, landing in Budapest, Hungary. This pattern will be repeated for each of the other regions. The class will complete the tour by flying back to Washington, D.C.

As you visit each country, you will collect information about that country and record it in a set of Country Notes pages in your journal. The World Tour section of your *Student Reference Book* will serve as a major source for that information.

As you make your world tour, there will be opportunities to learn about countries you have not visited. This World Tour section includes detailed information for 10 selected countries within each of the five regions of the world. It includes a Fascinating Facts insert that lists interesting facts about world geography, population, and climate. And it includes a collection of games played in different parts of the world that require logical or mathematical thinking. You can also look up additional information in a world almanac, *National Geographic* magazines, travel brochures, guidebooks, and newspapers.



A Chinese farmer waters crops by hand.



Women in Guatemala sell fruits and vegetables at a market.



Travel brochures include both country facts and travel information.

Washington, D.C. Facts

Washington, D.C., is the **capital** of the United States of America. The capital is where our country's laws are made. It is also where our president lives.

Washington, D.C., has been the capital of the United States since 1800. Before that, the capital was in Philadelphia, Pennsylvania. The capital city was named "Washington, the District of Columbia" in honor of George Washington and Christopher Columbus. "District of Columbia" is usually abbreviated as D.C.

Washington, D.C., has an area of 68 square miles. With a population of about 600,000 people, more people live in our capital city than in the state of Wyoming!

There are many interesting things to do in Washington, D.C. The facts below will help you plan your visit.

Average High/Low Temperatures (°F)			Average Precipitation (in.)	
Month	High	Low	Month	Precipitation
Jan	42	25	Jan	3.1
Feb	46	28	Feb	2.7
Mar	55	35	Mar	3.6
Apr	66	43	Apr	3.0
May	75	53	May	4.0
Jun	83	62	Jun	3.6
Jul	88	67	Jul	3.6
Aug	86	66	Aug	3.6
Sep	79	59	Sep	3.8
Oct	68	46	Oct	3.3
Nov	57	37	Nov	3.2
Dec	46	29	Dec	3.1

The White House

Every U.S. president except George Washington has lived here. The White House sits on 18 acres of land. It has 132 rooms, five of which can be seen on a 20-minute public tour. Every year more than 1,500,000 people tour the White House. Web site: <http://www.whitehouse.gov>

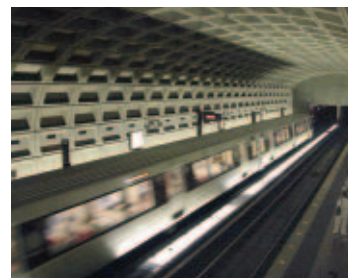


Washington, D.C. Facts

Washington Metrorail

This system of underground electric trains opened in 1976. There are 83 stations in the Washington area; some are decorated with beautiful artwork. They are connected by more than 103 miles of train lines. On an average weekday, about 500,000 people ride the Metro trains.

Web site: <http://www.wmata.com>



Washington Monument

This 555-foot-tall monument was built to honor George Washington, the first president of the United States. It is one of the tallest masonry structures in the world. You can take an elevator to a viewing area at the 500-foot level. The monument's cornerstone was laid in 1848, but building was interrupted by the Civil War (1861–1865). Construction workers started building again in 1880 and completed it in 1884. The Washington Monument receives more than 800,000 visitors each year.

Web site: <http://www.nps.gov/wamo>



Jefferson Memorial

This memorial was built in honor of Thomas Jefferson. Jefferson was the third president of the United States and the author of the *Declaration of Independence*. The memorial was dedicated in 1943, exactly 200 years after Jefferson was born. Inside the memorial, a statue of Jefferson stands 19 feet tall.

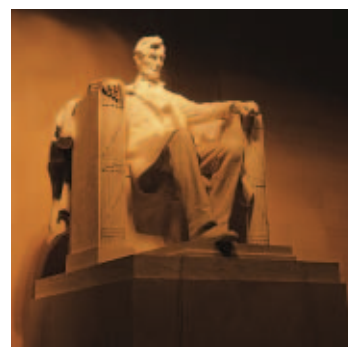
Web site: <http://www.nps.gov/thje/home.htm>



Lincoln Memorial

This memorial was built in 1922 in honor of Abraham Lincoln. Lincoln was the 16th U.S. president. Inside the memorial is a 19-foot-high statue of Lincoln seated in a large armchair. The statue is made of 28 blocks of white marble from the state of Georgia.

Web site: <http://www.nps.gov/linc/home.htm>



The United States Capitol

The Capitol Building is where the senators and representatives in Congress meet to make laws. George Washington laid its cornerstone in 1793. The building's cast iron dome weighs 9 million pounds. Brass doors that weigh 10 tons lead to the rotunda, which is 180 feet high and 96 feet in diameter.

Web site: <http://www.aoc.gov>



Library of Congress

The Library of Congress is the world's largest library. It contains more than 128 million items in 450 languages. It has about 535 miles of bookshelves. The Library is composed of three buildings. One of these, the James Madison Building, encloses an area greater than 35 football fields. The Library has more than 18 million books, 12 million photographs, 3 million sound recordings, and 5 million maps. It also has about 125,000 telephone books and 100,000 comic books. The Library of Congress collection grows by more than 10,000 items every day. Web site: <http://www.loc.gov>



National Museum of Natural History

Exhibits in the National Museum of Natural History include an 8-ton African bull elephant, the 45.5-carat Hope Diamond, a 360 million-year-old fossilized fish, a 90-foot-long skeleton of a diplodocus, a 30-foot-long giant squid, moon rocks, a mural of a 3.5 billion-year-old shoreline, and a life-size 92-foot model of a blue whale. The Insect Zoo has live insects as well as scorpions and tarantulas. In the Discovery Room, you can try on costumes from around the world. The museum is part of the Smithsonian Institution. Web site: <http://www.mnh.si.edu>



National Air and Space Museum

The National Air and Space Museum is the most popular museum in the world. Every year more than 10 million people visit it. Its collection includes the *Wright Flyer*, which is the original plane flown by the Wright brothers at Kitty Hawk, North Carolina, in 1903. It also includes the *Spirit of St. Louis*, the plane in which Charles Lindbergh made the first nonstop flight across the Atlantic in 1927. *Columbia*, the Apollo 11 command module that brought back the first men to walk on the moon in 1969, is also on display.

Web site: <http://www.nasm.si.edu>



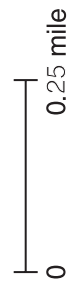
Map of the National Mall in Washington, D.C.



Map Key

- | | |
|------------------------|---------------------------------------|
| 1. The White House | 5. Capital Building |
| 2. Washington Monument | 6. Library of Congress |
| 3. Jefferson Memorial | 7. National Museum of Natural History |
| 4. Lincoln Memorial | 8. National Air and Space Museum |

1 inch = $\frac{1}{4}$ mile



Facts About the World

Continents are large land masses. There are seven continents on the Earth, although Europe and Asia are sometimes thought of as one continent. Most continents contain many countries, but there are no countries at all in Antarctica.

A **country** is a territory and the people who live there under one government. The number of countries in the world often changes as countries split apart or join with other countries. At this time, there are about 200 countries in the world.

Population is the number of people who live in a certain region. Population growth is the change in the population every year after all births and deaths are accounted for.

The **population growth rate** is the increase (or decrease) in population per year, written as a percent.

The world's population is now increasing by about 200,000 people per day, or about 75 million people per year. Over the last 40 years, the world's population has about doubled. It reached the 6 billion mark in 1999. World population is expected to reach about 9 billion people by the year 2050.

Dimensions of the Earth

Equatorial circumference*:

about 24,900 miles
(40,000 kilometers)

Equatorial diameter**:

about 7,930 miles
(12,760 kilometers)

Volume: 2.6×10^{11} cubic miles
(1.1×10^{12} cubic kilometers)

Weight (mass): 6.6×10^{21} tons
(6.0×10^{21} metric tons)

Total world water area:

about 139,433,000 square miles
(361,129,000 square kilometers)

*Circumference is the distance around a circle or sphere.

**Diameter is the distance measured by a straight line passing from one side of a circle or sphere, through the center, to the other side.

The Continents

Continent	Population*	Percent of World Population	Area (sq miles)	Percent of Land Area
North America	509,000,000	8.0%	8,300,000	14.8%
South America	367,000,000	5.8	6,800,000	12.1
Europe	799,000,000	12.5	4,100,000	7.3
Asia	3,797,000,000	59.5	16,700,000	29.8
Africa	874,000,000	13.7	11,500,000	20.5
Australia	32,000,000	0.5	3,300,000	5.9
Antarctica	0	0.0	5,400,000	9.6
World Totals	6,378,000,000 (about 6.4 billion)	100.0%	56,100,000	100.0%

*Data are for the year 2004. World population growth rate for the year 2004: about 1.2% per year

Latitude and Longitude

You sometimes use a world globe or a flat map to locate countries, cities, rivers, and so forth. Reference lines are drawn on globes and maps to make places easier to find.

Latitude

Lines that go east and west around the Earth are called **lines of latitude**. The **equator** is a special line of latitude. Every point on the equator is the same distance from the North Pole and the South Pole. Lines of latitude are called **parallels** because each one is a circle that is parallel to the equator.

Latitude is measured in **degrees**. The symbol for degrees is ($^{\circ}$). Lines north of the equator are labeled $^{\circ}\text{N}$. Lines south of the equator are labeled $^{\circ}\text{S}$. The number of degrees tells how far north or south of the equator a place is. The area north of the equator is called the **Northern Hemisphere**. The area south of the equator is called the **Southern Hemisphere**.

Examples

The latitude of Cairo, Egypt, is 30°N .

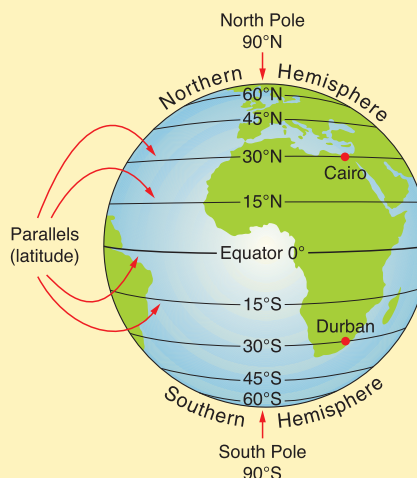
We say that Cairo is 30 degrees north of the equator.

The latitude of Durban, South Africa, is 30°S . Durban is in the Southern Hemisphere.

The latitude of the North Pole is 90°N .

The latitude of the South Pole is 90°S .

The poles are the points farthest north and farthest south on Earth.



Longitude

A second set of lines runs from north to south. These are semicircles (half-circles) that connect the poles. They are called **lines of longitude** or **meridians**. The meridians are not parallel since they meet at the poles.

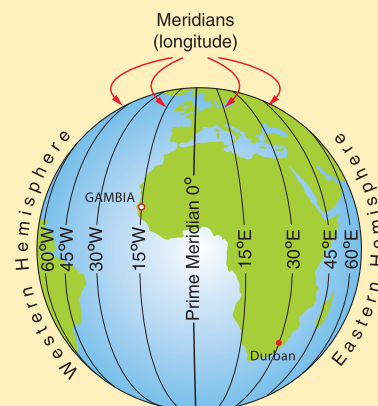
The **prime meridian** is the special meridian labeled 0° . The prime meridian passes through Greenwich, near London, England. Another special meridian falls on, or close to, the **International Date Line**. This meridian is labeled 180° and is exactly opposite the prime meridian, on the other side of the world.

Longitude is measured in degrees. Lines west of the prime meridian are labeled °W. Lines east of the prime meridian are labeled °E. The number of degrees tells how far west or east of the prime meridian a place is located. The area west of the prime meridian is called the **Western Hemisphere**. The area east of the prime meridian is called the **Eastern Hemisphere**.

Examples The longitude of London is 0° because London lies close to the prime meridian.

The longitude of Durban, South Africa, is 30°E . Durban is in the Eastern Hemisphere.

The longitude of Gambia (a small country in Africa) is about 15°W . We say that Gambia is 15 degrees west of the prime meridian.



When both latitude and longitude lines are shown on a globe or map, they form a pattern of crossing lines called a **grid**. The grid can help you locate places on the globe or map. Any place on the map can be located by naming its latitude and longitude.

Check Your Understanding

Use the grid below to find the approximate latitude and longitude for the cities shown on the map. For example, Denver, Colorado, is about 40° North and 105° West.



Check your answers on page 347.

Map Projections

A **world globe** shows the Earth accurately. All of the distances and directions are shown correctly. The sizes and shapes of countries, bodies of water, and other features are all as correct as possible.

A **flat map** is often easier to use than a globe. But all flat maps have a common problem. Since the Earth is a sphere, no flat map can show the whole Earth as it really is in the same way that a globe can. Some features will be distorted on a flat map.

Pretend you are a map maker trying to turn a world globe into a flat map of the world. Imagine peeling the Earth map off the globe and laying it flat. That would be like peeling an orange and then flattening the peel. You can almost do this if you tear the peel into many small pieces. But even those pieces are rounded and will not lie perfectly flat.

Map makers have invented many ways to show the spherical world as a flat map. These flat views of the Earth are called **map projections**. Every map projection has some distortions because the map maker must cut and stretch the shape of the globe to make it flat.

The Mercator Projection

One of the most common types of flat maps is the **Mercator projection**. It was invented by Gerardus Mercator in 1569. Mercator's map projection was useful to sailors, but as a picture of our world, it creates many false impressions.

A Mercator map exaggerates areas that are nearer to the poles. For example, Greenland looks to be about the same size as Africa. But, Africa is actually about 15 times the size of Greenland.

The Robinson Projection

Another kind of flat map is the **Robinson projection**. It makes the world look somewhat like a globe. Areas near the poles are distorted, but they are distorted a lot less than they are on a Mercator map.

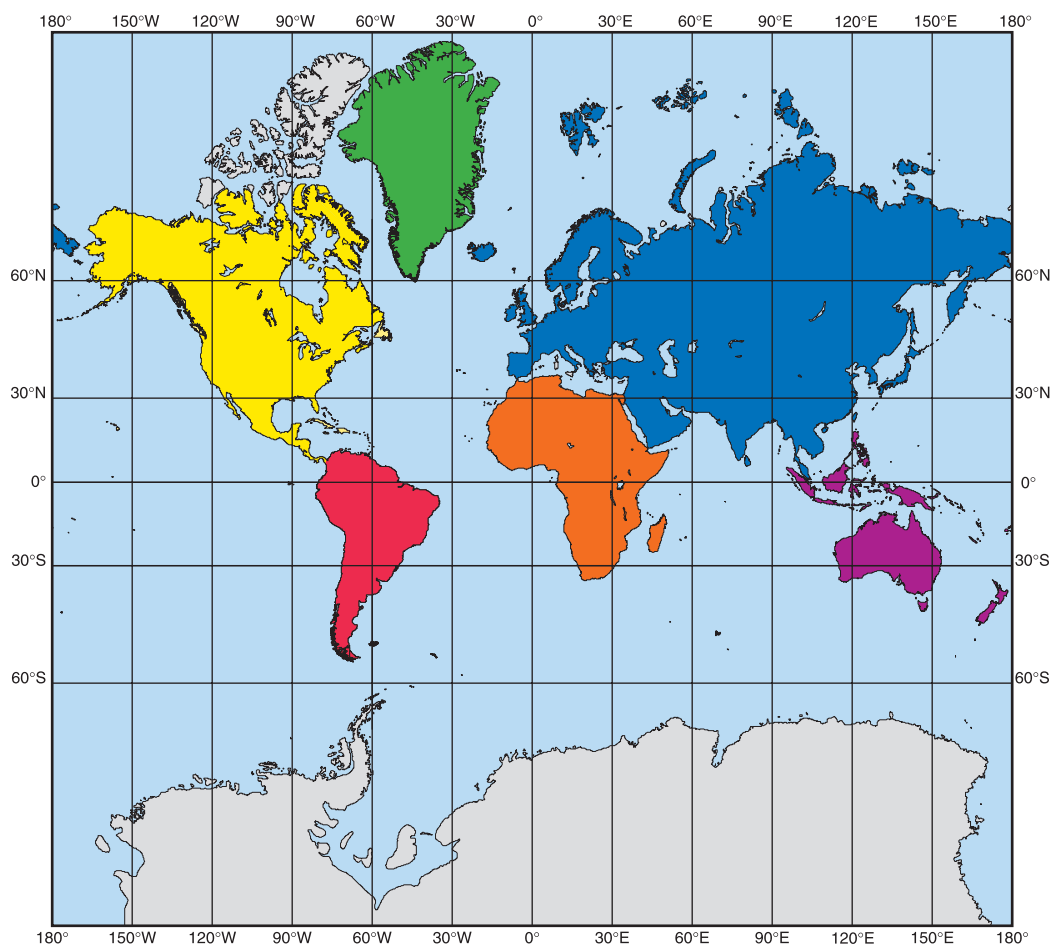
The National Geographic Society and many map companies use the Robinson projection.

Note

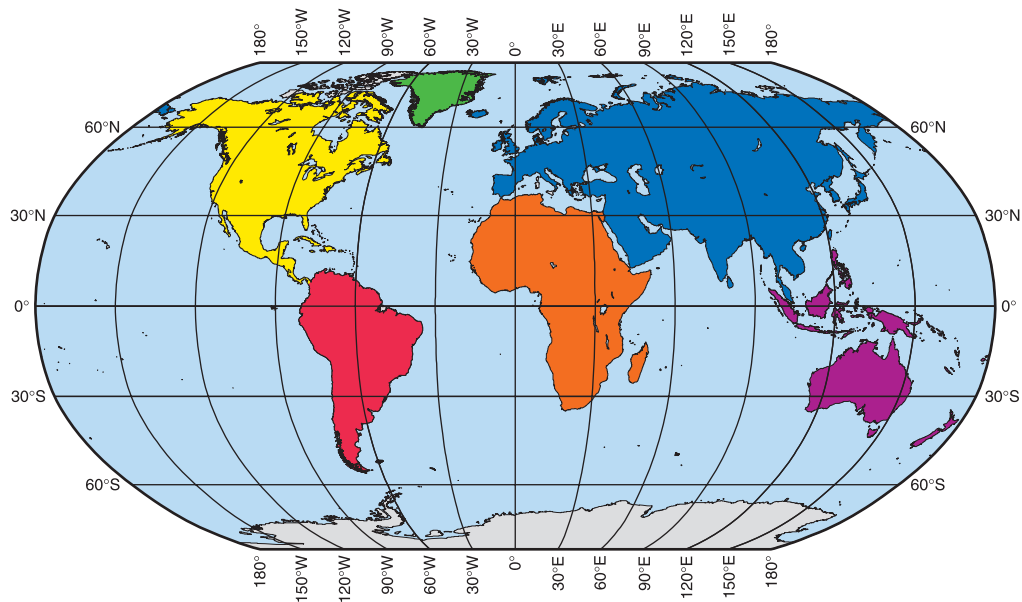
Look at the Mercator map on the opposite page.

- Notice that the meridians (lines of longitude) are an equal distance apart. On a globe, the meridians get closer as they get near the poles.
- Notice that the parallels (lines of latitude) are farther apart toward the poles. On a globe, the parallels are an equal distance apart.

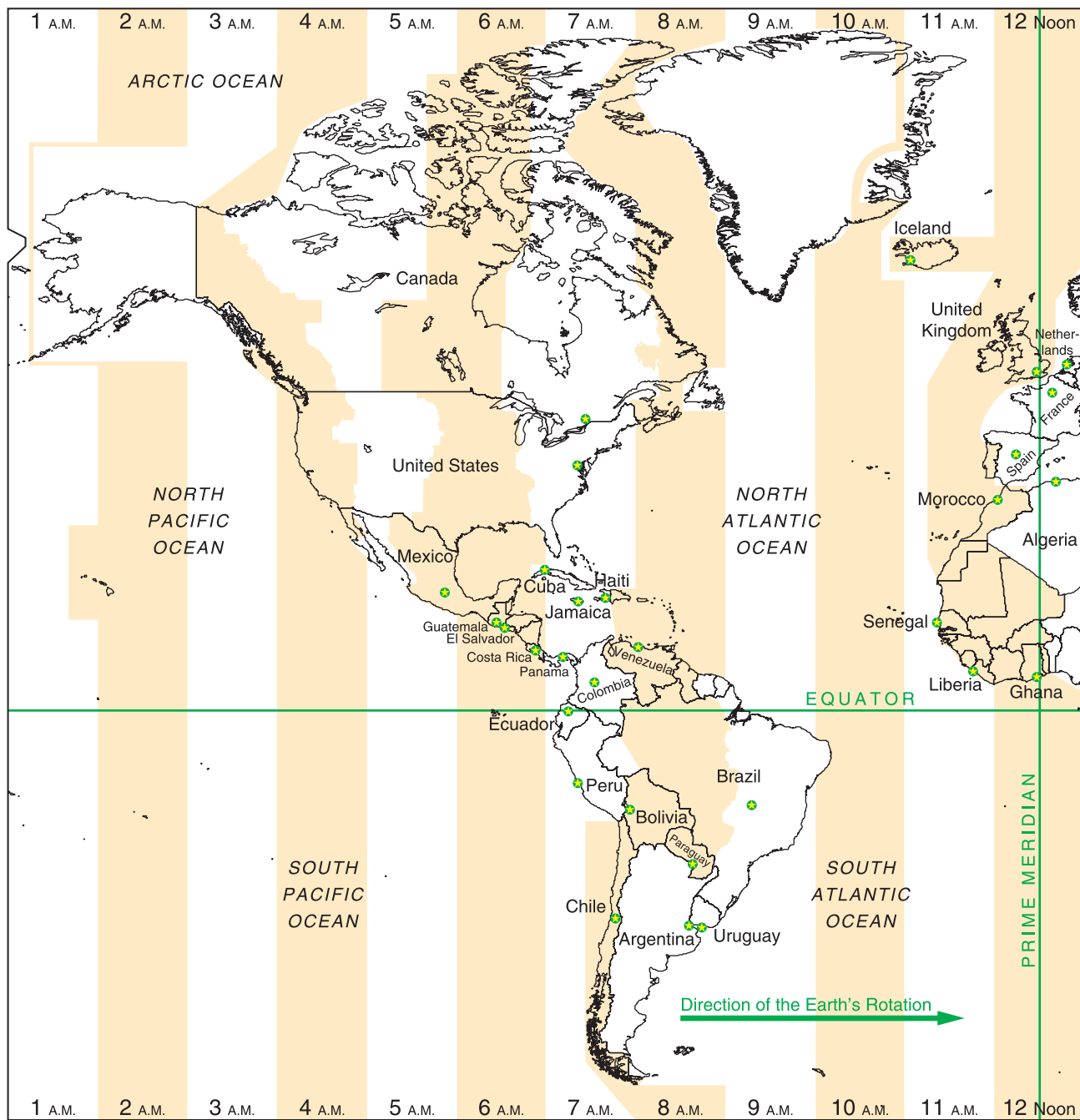
Mercator Projection



Robinson Projection

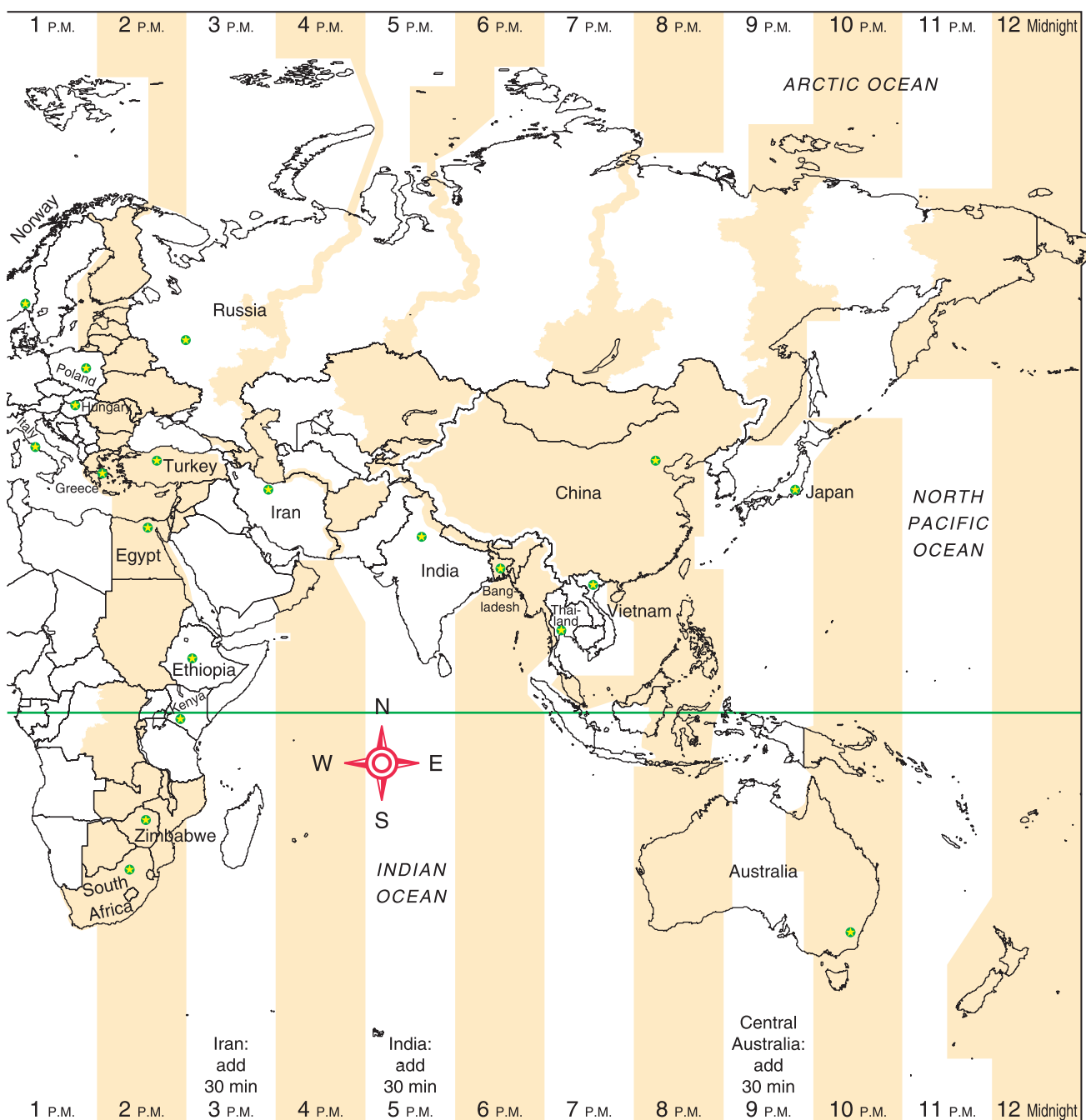


Time Zones of the World



The Earth is divided into 24 time zones. We need time zones because the Earth is spinning, and the sun does not shine on all of the Earth at the same time. It takes one day, or 24 hours, for the Earth to make one complete spin. Each time zone represents one of the 24 hours of that day.

This map shows all 24 time zones. The times are given at the top and bottom of the map. As you read from left to right, the time is one hour later in each zone. This is because the Earth rotates toward the east, which is left to right on the map. The arrow near the bottom of the map shows the direction of the Earth's rotation.



The map tells you what time it is in a location when it is 12 noon in London, England.

- Put your finger on the place you want to find the time for. See if it is in a gold strip or a white strip.
- Keep your finger in the strip you start in. Follow it up to the top of the map or down to the bottom. Read the time.

If you know the time in one location, you can find the time in another location.

- Put your finger on the place that is farther west.
- Slide your finger to the right until you reach the place that is farther east.
- Count the number of gold and white time zones you enter as you slide your finger.
- The number of time zones you enter is the number of hours that the place to the east is ahead of the place to the west.

Political and Physical Maps

Maps can help you study the geography of a region. You can use a map to find out about a region's size and its land and water features.

There are many types of maps. Each one has a special purpose.

- ◆ **Political maps** identify countries and cities. They show the **boundaries** (borders) of countries. They may also show areas within a country such as states or counties. Sometimes these maps also show rivers and lakes.
- ◆ **Physical maps** show features such as rivers, lakes, mountain ranges, and deserts. They may use lines or shading to identify mountains, valleys, and low spots. Some physical maps use different colors to show **elevation** (height above sea level) on a map. Many physical maps do not include country boundaries or city names.

The maps in this World Tour section of your *Student Reference Book* are both political *and* physical maps. There is a map for every continent except Antarctica. Countries and capital cities are identified. Major rivers, lakes, mountain ranges, and deserts are shown. The maps use different colors to help you locate countries more easily, but colors are not used to show elevations.

Each map has two features that are found on most maps:

- ◆ A **legend** or **key** explains the symbols and markings on the map. Several **symbols** and **abbreviations** that are often used in map legends are listed in the margin. The legend is one of the first places to look when reading a map.
- ◆ A **map scale** compares distances on the map with actual distances. The scale is shown in a ruler-like diagram. The scale is also given in words such as "1 inch represents 400 miles."

Note

Map symbols:

- Capital cities are marked with a ★.
- Mountain peaks are marked with a Δ.

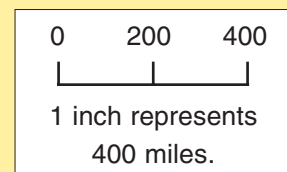
Map abbreviations:

R. means river.

L. means lake.

Mt. means mountain.

Example of a map scale:



Country Profiles

The countries you can visit on your world tour are listed below by geographical region. Languages in bold type are the official languages of a country. Some countries have no official language, while others have more than one. All measurements in the country profiles are approximate.



REGION 1 Africa

Algeria

Area: 919,600 sq mi

Population: 32,129,000

Capital: Algiers (**Pop.** 3,060,000)

Languages: Arabic, French, Berber

Monetary unit: Dinar

Egypt

Area: 386,700 sq mi

Population: 76,117,000

Capital: Cairo (**Pop.** 10,834,000)

Languages: Arabic, English, French

Monetary unit: Pound

Ethiopia

Area: 435,200 sq mi

Population: 67,851,000

Capital: Addis Ababa (**Pop.** 2,723,000)

Languages: Amharic, Tigrinya, Orominga

Monetary unit: Birr

Ghana

Area: 92,500 sq mi

Population: 20,757,000

Capital: Accra (**Pop.** 1,847,000)

Languages: English, Akan, Ewe, Ga, Moshi-Dagomba

Monetary unit: Cedi

Kenya

Area: 225,000 sq mi

Population: 32,022,000

Capital: Nairobi (**Pop.** 2,575,000)

Languages: Swahili, English, numerous indigenous languages

Monetary unit: Shilling

Liberia

Area: 43,000 sq mi

Population: 3,391,000

Capital: Monrovia (**Pop.** 572,000)

Languages: English, tribal languages

Monetary unit: Liberian Dollar

Morocco

Area: 172,400 sq mi

Population: 32,209,000

Capital: Rabat (**Pop.** 1,759,000)

Languages: Arabic, Berber

Monetary unit: Dirham

Senegal

Area: 75,700 sq mi

Population: 10,852,000

Capital: Dakar (**Pop.** 2,167,000)

Languages: French, Pulaar, Wolof, Diola, Mandingo

Monetary unit: CFA franc

South Africa

Area: 471,000 sq mi

Population: 42,719,000

Capitals: Pretoria

(**Pop.** 1,209,000), administrative; Cape Town (**Pop.** 2,967,000), legislative; Bloemfontein, judicial

Languages: 11 official languages including Afrikaans, English, Ndebele, Sotho, Pedi

Monetary unit: Rand

Languages: English, Sindebele, Shona

Zimbabwe

Area: 150,800 sq mi

Population: 12,672,000

Capital: Harare (**Pop.** 1,469,000)

Languages: English, Sindebele, Shona

Monetary unit: Zimbabwe Dollar

REGION 2 Europe

France

Area: 211,200 sq mi
Population: 60,424,000
Capital: Paris (**Pop.** 9,794,000)
Language: French
Monetary unit: Euro

Greece

Area: 50,900 sq mi
Population: 10,648,000
Capital: Athens (**Pop.** 3,215,000)
Languages: Greek, English, French
Monetary unit: Euro

Hungary

Area: 35,900 sq mi
Population: 10,032,000
Capital: Budapest (**Pop.** 1,708,000)
Language: Hungarian (Magyar)
Monetary unit: Forint

Iceland

Area: 40,000 sq mi
Population: 294,000
Capital: Reykjavik (**Pop.** 184,000)
Language: Icelandic
Monetary unit: Krona

Italy

Area: 116,300 sq mi
Population: 58,057,000
Capital: Rome (**Pop.** 2,665,000)
Languages: Italian, German, French, Slovene
Monetary unit: Euro

Netherlands

Area: 16,000 sq mi
Population: 16,318,000
Capital: Amsterdam (**Pop.** 1,145,000)
Language: Dutch
Monetary unit: Euro

Norway

Area: 125,200 sq mi
Population: 4,575,000

Capital: Oslo (**Pop.** 795,000)
Language: Norwegian
Monetary unit: Kroner

Poland

Area: 120,700 sq mi
Population: 38,626,000
Capital: Warsaw (**Pop.** 2,200,000)
Language: Polish
Monetary unit: Zloty

Spain

Area: 194,900 sq mi
Population: 40,281,000
Capital: Madrid (**Pop.** 5,103,000)
Languages: Castilian Spanish, Basque, Catalan, Galician
Monetary unit: Euro

United Kingdom

Area: 94,500 sq mi
Population: 60,271,000
Capital: London (**Pop.** 7,619,000)
Languages: English, Welsh, Scottish, Gaelic
Monetary unit: Pound

REGION 3 South America

Argentina

Area: 1,068,300 sq mi
Population: 39,145,000
Capital: Buenos Aires (**Pop.** 13,047,000)
Languages: Spanish, English, Italian
Monetary unit: Peso

Bolivia

Area: 424,200 sq mi
Population: 8,724,000
Capital: La Paz (**Pop.** 1,477,000)
Languages: Spanish, Quechua, Aymara
Monetary unit: Boliviano

Brazil

Area: 3,286,500 sq mi
Population: 184,101,000
Capital: Brasília (**Pop.** 3,099,000)
Languages: Portuguese, English, Spanish, French
Monetary unit: Real

Chile

Area: 292,300 sq mi
Population: 15,824,000
Capital: Santiago (**Pop.** 5,478,000)
Language: Spanish
Monetary unit: Peso

Colombia

Area: 439,700 sq mi
Population: 42,311,000
Capital: Bogota (**Pop.** 7,290,000)
Language: Spanish
Monetary unit: Peso

Ecuador

Area: 109,500 sq mi
Population: 13,213,000
Capital: Quito (**Pop.** 1,451,000)
Languages: Spanish, Quechua, other Amerindian
Monetary unit: U.S. Dollar

Paraguay

Area: 157,000 sq mi
Population: 6,191,000
Capital: Asunción (**Pop.** 1,639,000)
Languages: Spanish, Guaraní
Monetary unit: Guaraní

Peru

Area: 496,200 sq mi
Population: 27,544,000
Capital: Lima (**Pop.** 7,899,000)
Languages: Spanish, Quechua, Aymara
Monetary unit: Nuevo Sol

Uruguay

Area: 68,000 sq mi
Population: 3,399,000
Capital: Montevideo (**Pop.** 1,341,000)
Language: Spanish
Monetary unit: Peso

Venezuela

Area: 352,100 sq mi
Population: 25,017,000
Capital: Caracas (**Pop.** 3,226,000)
Language: Spanish
Monetary unit: Bolívar

REGION 4 Asia and Australia

Australia

Area: 2,967,900 sq mi
Population: 19,913,000
Capital: Canberra (**Pop.** 373,000)
Languages: English, aboriginal languages
Monetary unit: Australian Dollar

Bangladesh

Area: 55,600 sq mi
Population: 141,340,000
Capital: Dhaka (**Pop.** 11,560,000)
Languages: Bangla, English
Monetary unit: Taka

China

Area: 3,705,400 sq mi
Population: 1,298,848,000
Capital: Beijing (**Pop.** 10,848,000)
Languages: Mandarin, Gan, Wu, Haka, Yue, Minbei, Xiang, Minnan
Monetary unit: Renminbi (Yuan)

India

Area: 1,269,300 sq mi
Population: 1,065,071,000
Capital: New Delhi (**Pop.** 12,441,000)

Languages: Hindi, English, 14 regional languages
Monetary unit: Rupee

Iran

Area: 636,000 sq mi
Population: 67,503,000
Capital: Tehran (**Pop.** 7,190,000)
Languages: Farsi, Kurdish, Turkic, Luri
Monetary unit: Rial

Japan

Area: 145,900 sq mi
Population: 127,333,000
Capital: Tokyo (**Pop.** 34,997,000)
Language: Japanese
Monetary unit: Yen

Russia

Area: 6,592,800 sq mi
Population: 143,782,000
Capital: Moscow (**Pop.** 6,468,000)
Languages: Russian, many others
Monetary unit: Ruble

Thailand

Area: 198,500 sq mi
Population: 64,866,000
Capital: Bangkok (**Pop.** 6,486,000)
Languages: Thai, English
Monetary unit: Baht

Turkey

Area: 301,400 sq mi
Population: 68,894,000
Capital: Ankara (**Pop.** 3,428,000)
Languages: Turkish, Arabic, Kurdish
Monetary unit: Lira

Vietnam

Area: 127,200 sq mi
Population: 82,690,000
Capital: Hanoi (**Pop.** 3,977,000)
Languages: Vietnamese, Chinese, French, English
Monetary unit: Dong

REGION 5 North America

Canada

Area: 3,851,800 sq mi
Population: 32,508,000
Capital: Ottawa (**Pop.** 1,093,000)
Languages: English, French
Monetary unit: Dollar

Costa Rica

Area: 19,700 sq mi
Population: 3,957,000
Capital: San José (**Pop.** 1,085,000)
Language: Spanish
Monetary unit: Colon

Cuba

Area: 42,800 sq mi
Population: 11,309,000
Capital: Havana (**Pop.** 2,189,000)
Language: Spanish
Monetary unit: Peso

El Salvador

Area: 8,100 sq mi
Population: 6,588,000
Capital: San Salvador (**Pop.** 1,424,000)

Language: Spanish
Monetary unit: Colon

Guatemala

Area: 42,000 sq mi
Population: 14,281,000
Capital: Guatemala City (**Pop.** 951,000)
Languages: Spanish, Mayan languages
Monetary unit: Quetzal

Haiti

Area: 10,700 sq mi
Population: 7,656,000
Capital: Port-au-Prince (**Pop.** 1,961,000)
Languages: French, Haitian Creole
Monetary unit: Gourde

Jamaica

Area: 4,200 sq mi
Population: 2,713,000
Capital: Kingston (**Pop.** 575,000)
Languages: English, Jamaican Creole
Monetary unit: Jamaican Dollar

Mexico

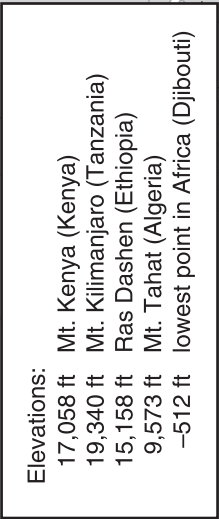
Area: 761,600 sq mi
Population: 104,960,000
Capital: Mexico City (**Pop.** 18,660,000)
Languages: Spanish, Mayan dialects
Monetary unit: New Peso

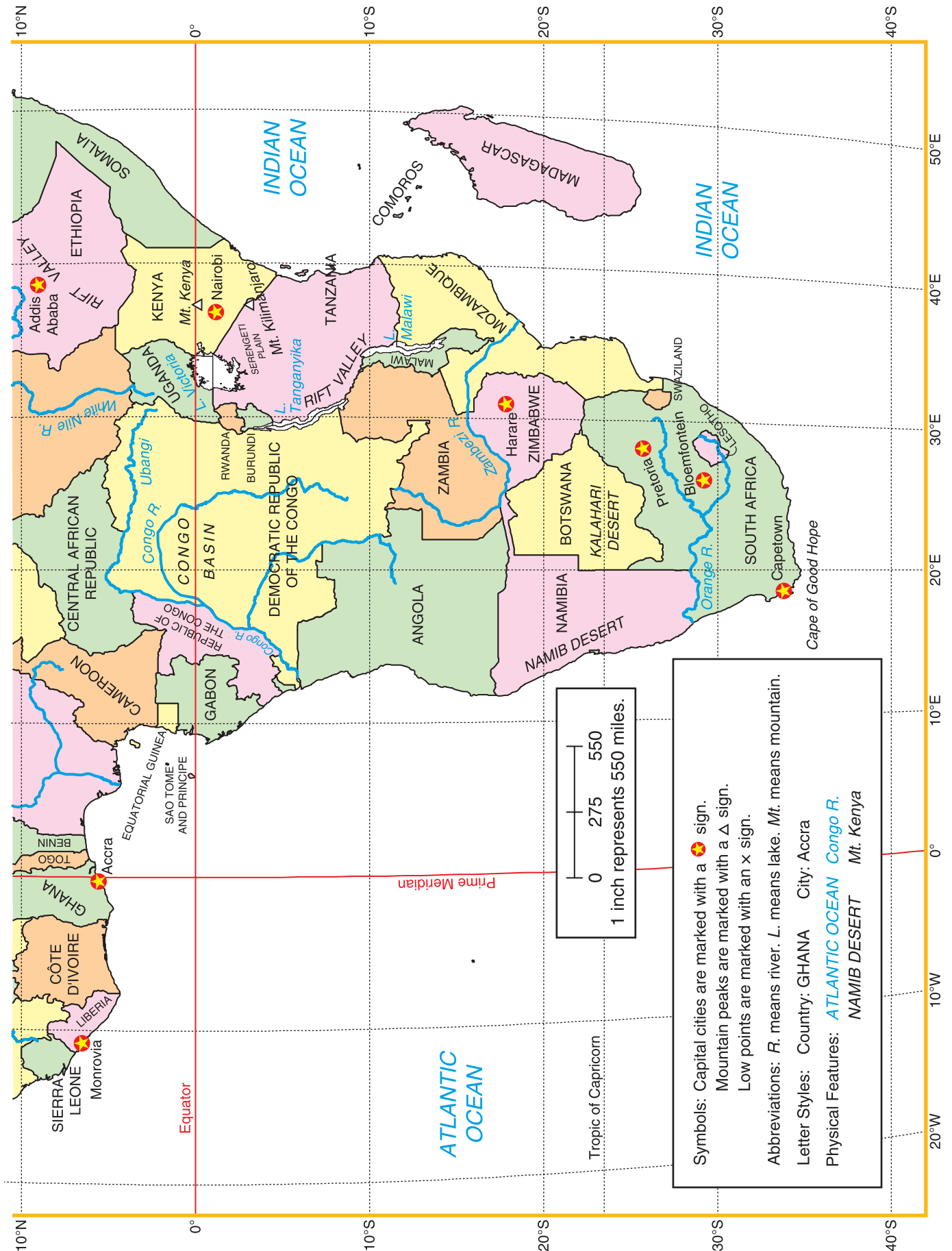
Panama

Area: 30,200 sq mi
Population: 3,000,000
Capital: Panama City (**Pop.** 930,000)
Languages: Spanish, English
Monetary unit: Balboa

United States of America

Area: 3,717,800 sq mi
Population: 293,028,000
Capital: Washington, D.C. (**Pop.** 563,000)
Languages: English, Spanish
Monetary unit: Dollar







Region 2: Europe



Symbols:

Capital cities are marked with a ★ sign.

Mountain peaks are marked with a Δ sign.

Abbreviations:

R. means river.

Mt. means mountain.

Mts. means mountains.

Letter Styles:

Country: ITALY

City: Rome

Physical Features:

ATLANTIC OCEAN

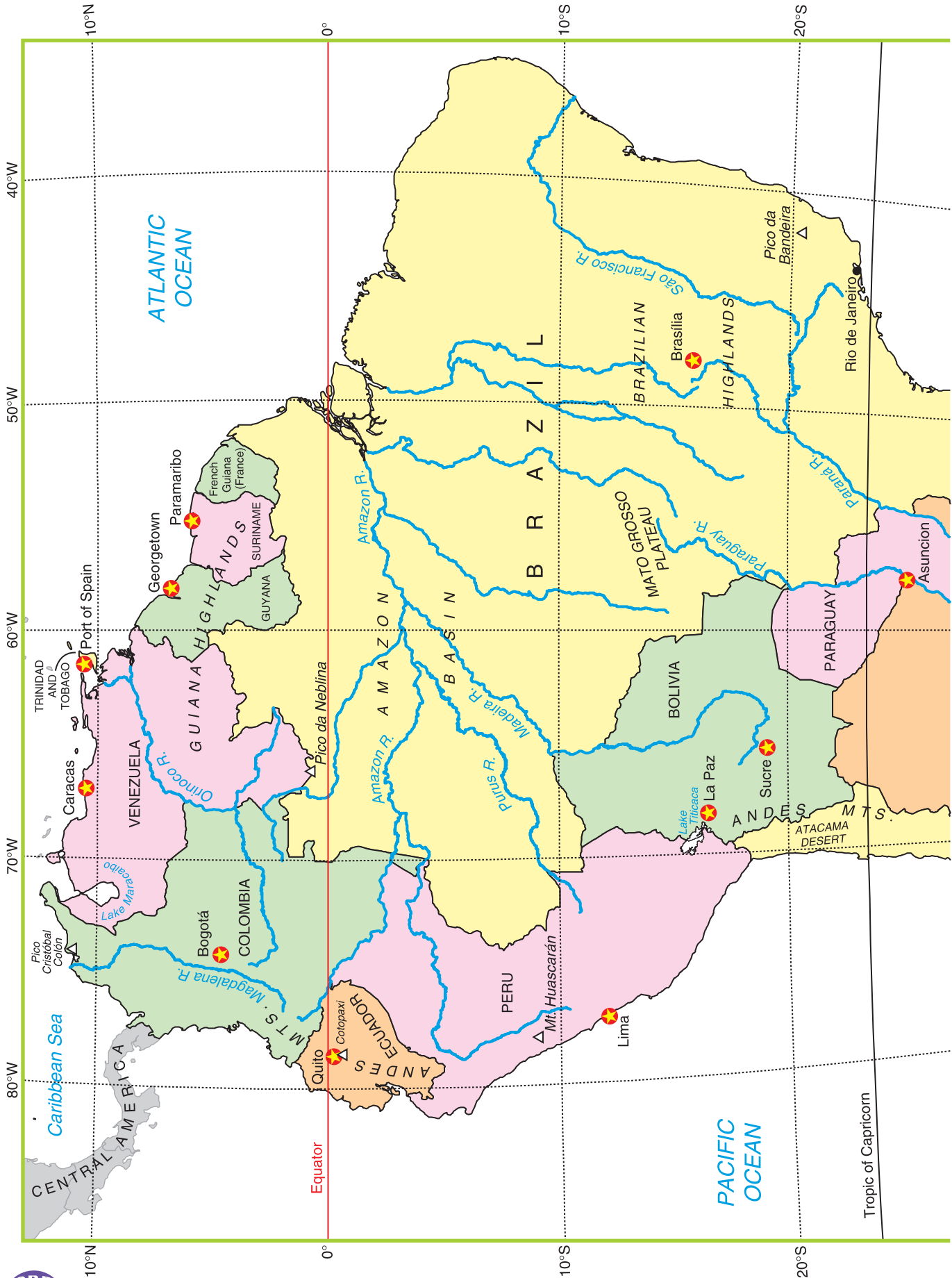
Seine R.

ALPS

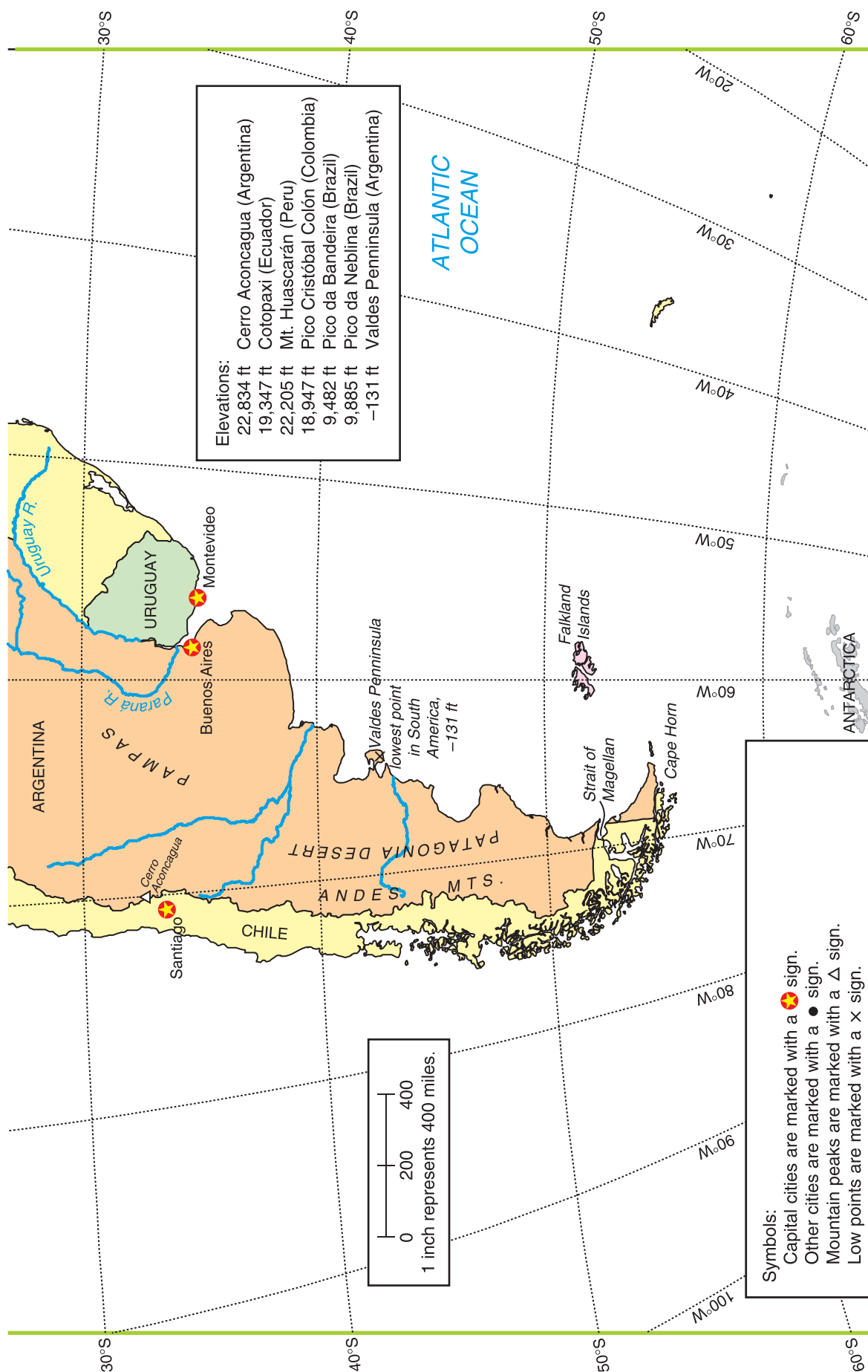
Mont Blanc

Elevations:

18,510 ft	Mt. El'brus (Russia)
11,053 ft	Etna (Italy)
8,104 ft	Glittertind (Norway)
6,952 ft	Hvannadalshnúkur (Iceland)
14,690 ft	Matterhorn (Italy–Switzerland border)
15,771 ft	Mont Blanc (France–Italy border)
9,570 ft	Olympus (Greece)
11,168 ft	Pico de Aneto (Spain)
4,202 ft	Vesuvius (Italy)



Region 3: South America



Symbols:

Capital cities are marked with a ★ sign.

Other cities are marked with a ● sign.

Mountain peaks are marked with a Δ sign.

Low points are marked with a x sign.

Abbreviations:

R. means river. Mt. means mountain. Mts. means mountains.

Letter Styles:

Country: BRAZIL City: Brasilia

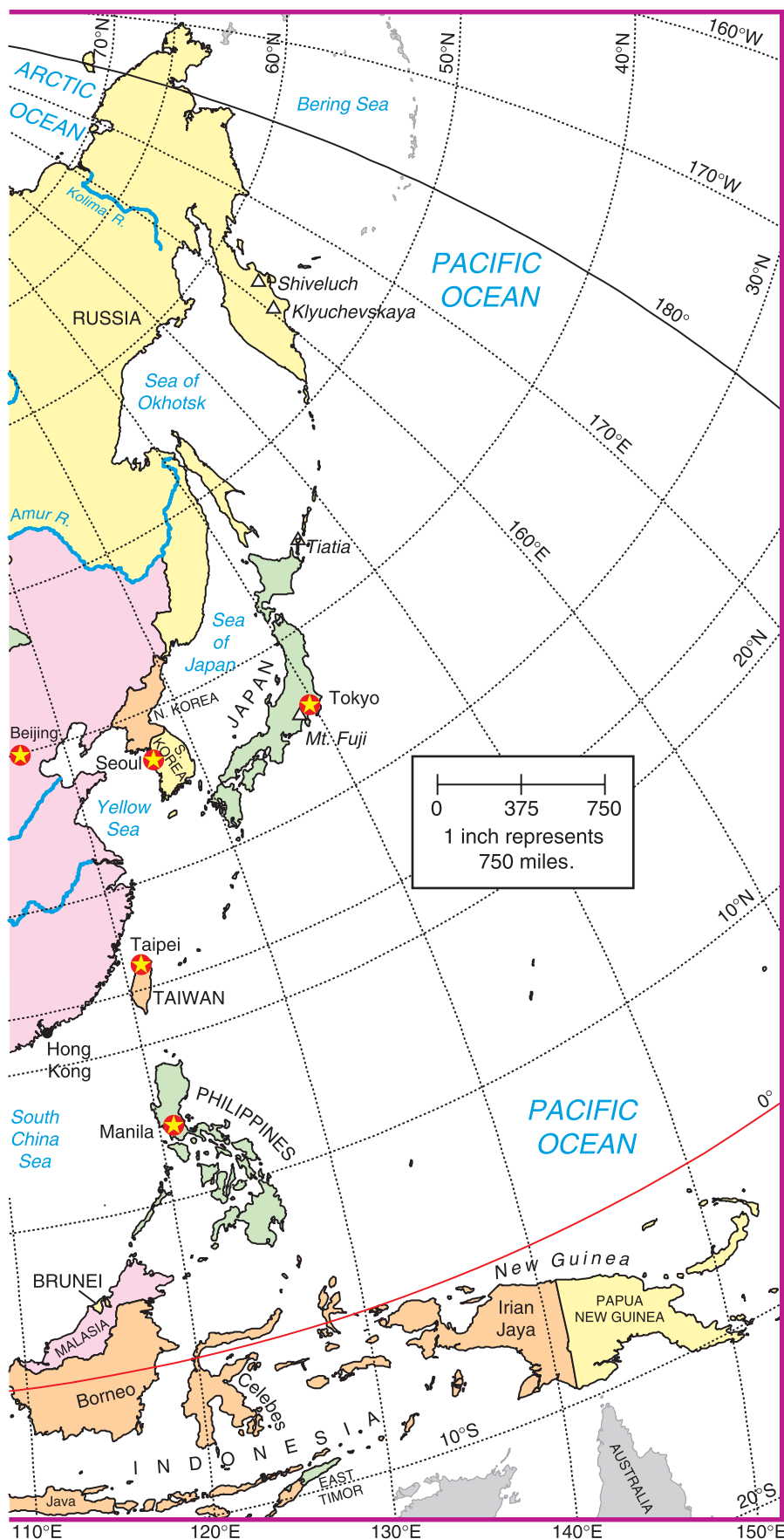
Physical Features:

ATLANTIC OCEAN Amazon R.

ATACAMA DESERT Mt. Huascarán



Region 4: Asia



Symbols:

Capital cities are marked with a ★ sign.

Other cities are marked with a ● sign.

Mountain peaks are marked with a △ sign.

Abbreviations:

R. means river.

Mt. means mountain.

Mts. means mountains.

U.A.E. means United Arab Emirates.

BHU. means Bhutan.

Letter Styles:

Country: CHINA

City: Beijing

Physical Features:

PACIFIC OCEAN

Ganges R.

HIMALAYAS

Mt. Everest

Elevations:

18,510 ft	Mt. El'brus (Russia)
29,028 ft	Mt. Everest (China–Nepal border)
12,388 ft	Mt. Fuji (Japan)
24,406 ft	Jengish Chokusu (Kyrgyzstan)
19,584 ft	Klyuchevskaya (Russia)
28,250 ft	K2 (China–Pakistan border)
10,771 ft	Shiveluch (Russia)
6,013 ft	Tiatia (Russia)

Region 4: Australia

Symbols:

- Capital cities are marked with a ★ sign.
- Other major cities are marked with a ● sign.
- Smaller cities are marked with a ○ sign.
- Mountain peaks are marked with a ▲ sign.
- Low points are marked with an × sign.

Abbreviations:

- R. means river.
- Mt. means mountain.

Letter Styles:

- Country: AUSTRALIA
- State: Victoria
- City: Canberra

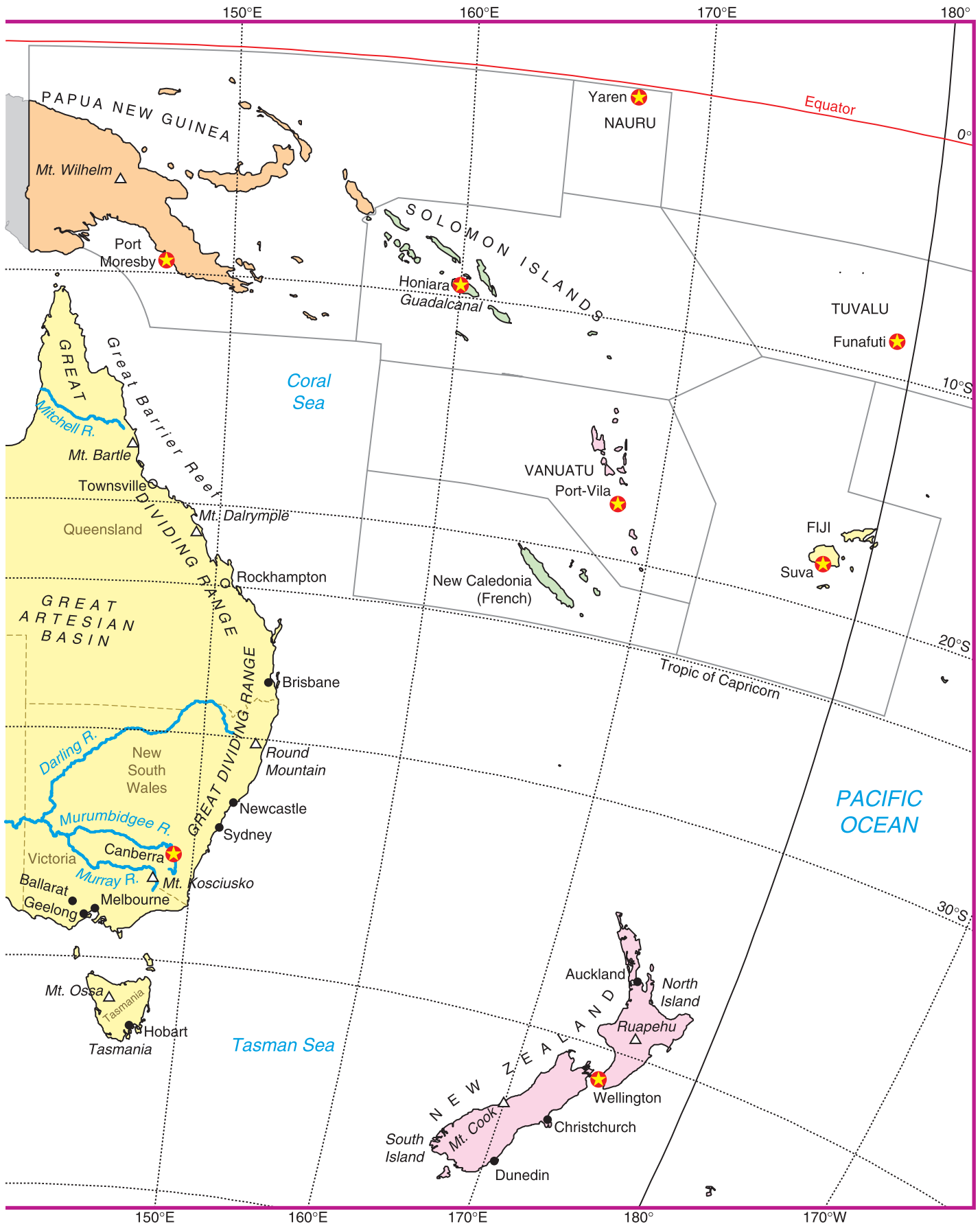
Physical Features:

- PACIFIC OCEAN
- Darling R.
- GREAT SANDY DESERT
- Mt. Kosciusko

Elevations:

- 2,844 ft Ayers Rock (Australia)
- 5,322 ft Mt. Bartle (Australia)
- 4,052 ft Mt. Bruce (Australia)
- 12,349 ft Mt. Cook (New Zealand)
- 4,131 ft Mt. Dalrymple (Australia)
- 2,546 ft Mt. Hann (Australia)
- 7,310 ft Mt. Kosciusko (Australia)
- 5,305 ft Mt. Ossa (Australia)
- 16,500 ft Puncak Jaya (Indonesia)
- 5,276 ft Round Mountain (Australia)
- 9,175 ft Ruapehu (New Zealand)
- 14,793 ft Mt. Wilhelm (Papua New Guinea)
- 4,724 ft Mt. Woodroffe (Australia)
- 4,957 ft Mt. Ziel (Australia)
- 52 ft Lake Eyre (Australia)





Region 5: North America

Elevations:

19,551 ft	Mt. Logan (Canada)
20,320 ft	Mt. McKinley (United States)
6,684 ft	Mt. Mitchell (United States)
18,555 ft	Pico de Orizaba (Mexico)
14,110 ft	Pikes Peak (United States)
14,410 ft	Mt. Rainier (United States)
13,845 ft	Tajumulco (Guatemala)
14,494 ft	Mt. Whitney (United States)
-282 ft	Death Valley (United States)

Symbols: Capital cities are marked with a  sign.

Other cities are marked with a  sign.

Mountain peaks are marked with a  sign.

Low points are marked with an  sign.

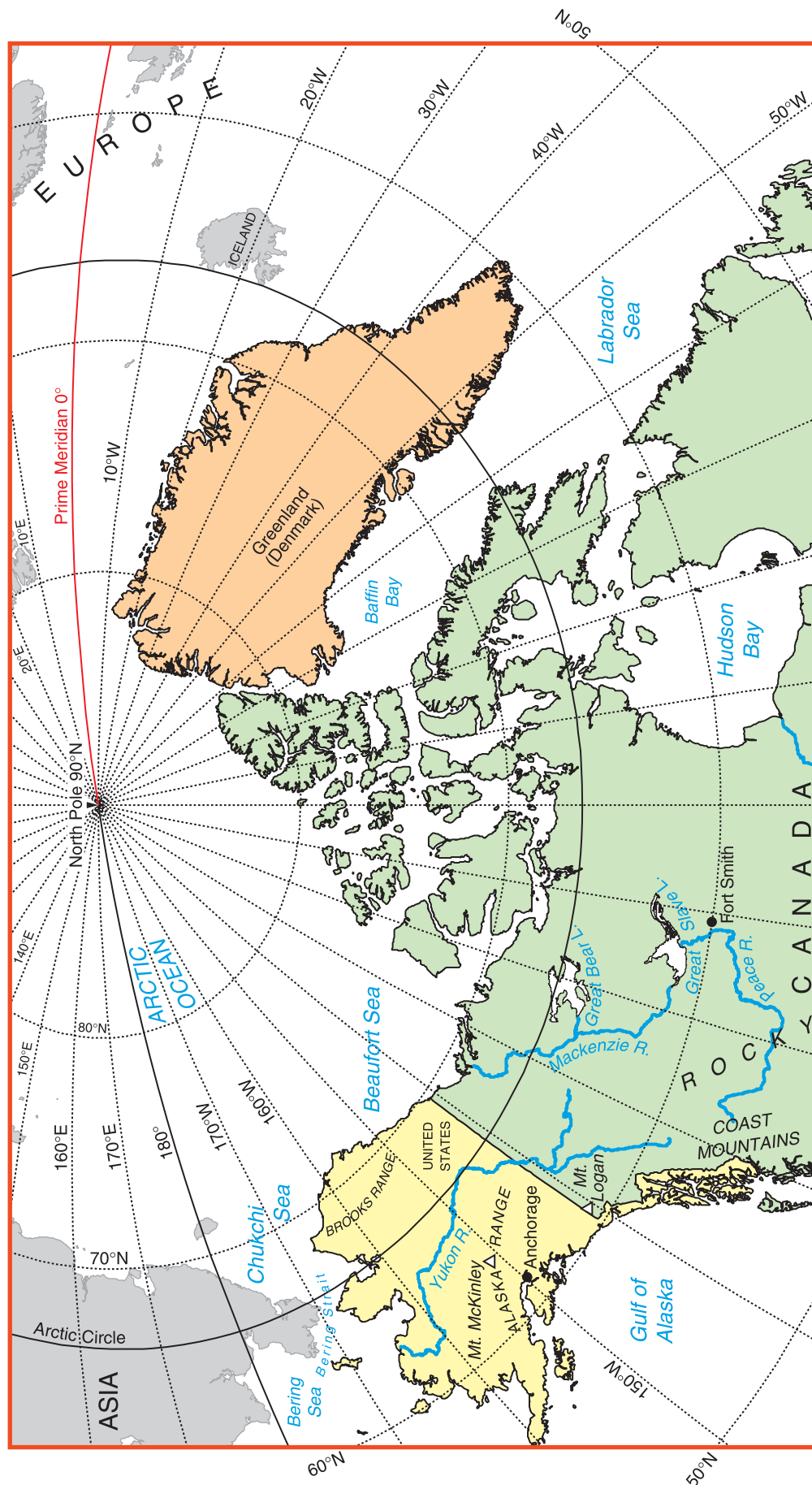
Abbreviations: R. means river. L. means lake.

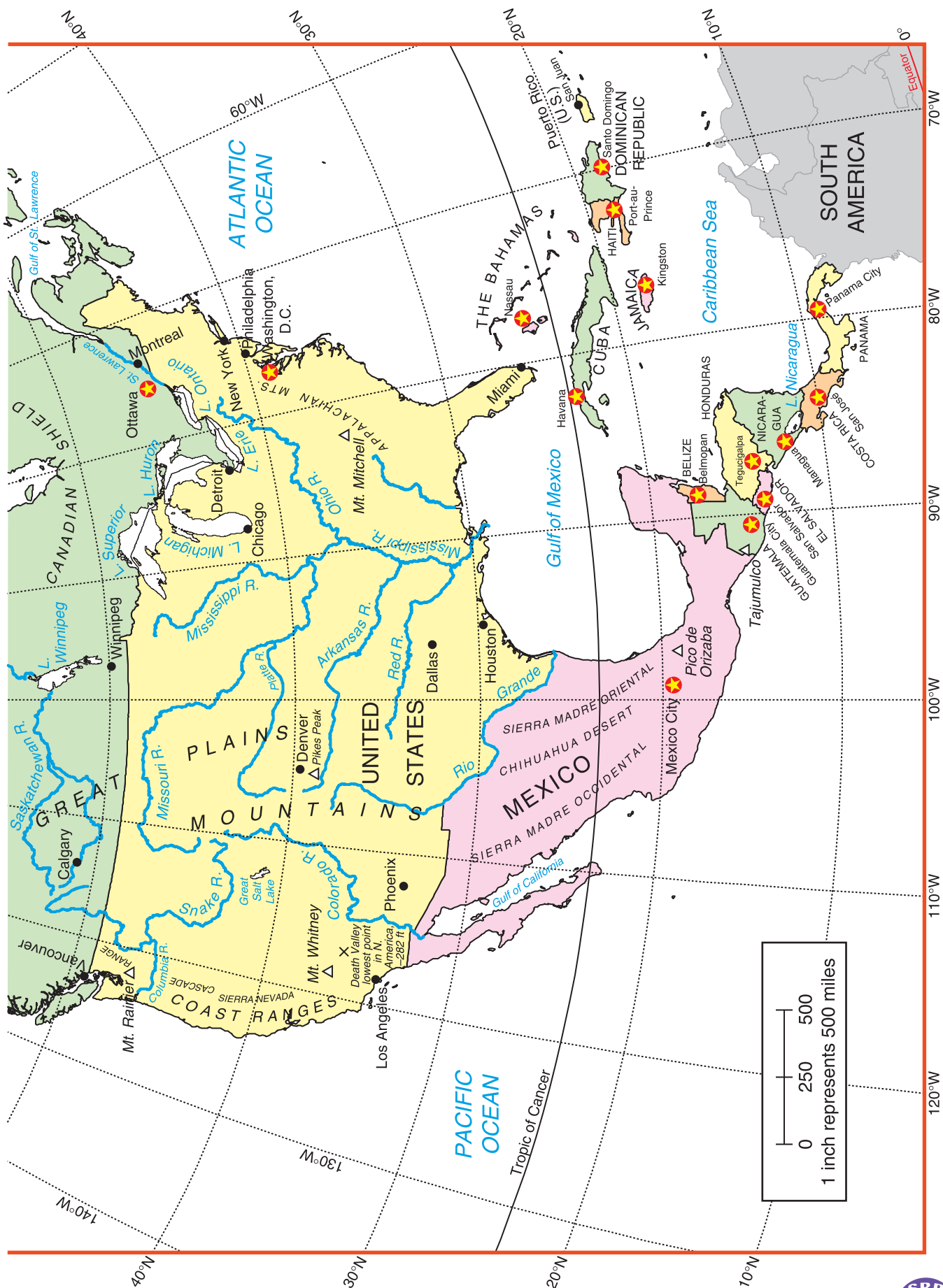
Mt. means mountain. Mts. means mountains.

Letter Styles: Country: CANADA City: Ottawa

Physical Features: ATLANTIC OCEAN Mississippi R.

GREAT PLAINS Mt. Whitney





Geographical Measurements

Have you ever wondered how the heights of mountains or the lengths of rivers are measured? How accurate are these measurements? Vertical measurements, such as heights and depths, are recorded as distances above or below sea level. The term **elevation** means height above sea level.

Many measurements are made with surveying instruments. These measurements can be made more accurately by using data collected by satellites.

- ◆ The parts of a city are not all the same height above sea level. Many cities in the United States have an elevation marker somewhere in the downtown area. The elevation marker tells the height of the city above sea level and is accurate to the nearest foot. For example, Denver, Colorado, has an elevation of 5,260 feet. Since $1 \text{ mile} = 5,280 \text{ feet}$, Denver is almost exactly 1 mile high.
- ◆ The height of a mountain is the elevation at its highest point. The land around mountains is often very rugged. So the reported heights of mountains may be less accurate than the reported elevations of cities.
- ◆ The depth of an ocean is measured by sending sound signals to the ocean floor. The time it takes for these signals to reach the bottom and bounce back is used to determine the ocean's depth. Depth measurements are usually accurate to the nearest 10 feet.

Other measurements are made without measuring the object.

- ◆ The length of a river is usually measured using very accurate maps, created with the help of satellite photographs. The instrument used to measure length is the size of a ballpoint pen but with a very small wheel instead of a ball at its tip. This instrument is moved on the map along the full length of the river. Using the map scale, the number of times the wheel rotates is converted into the actual length of the river.

Length-of-river measurements are usually accurate to the nearest mile for each 500 miles of river. For example, the length of a 3,000-mile-long river is probably accurate to the nearest 6 miles.



In recent years, *laser altimeters* have been used to measure the elevations of mountains from aircraft and satellites. These measures are accurate to within 2 meters.



River-length measurements are accurate to within $\frac{1}{5}$ of 1%, or $\frac{1}{5}$ of a mile for each 100 miles measured.

Geographical Area Measurements

The heights of mountains and the depths of oceans are obtained *directly*. We find heights and depths by measuring the Earth itself.

The areas of countries and the areas of oceans are found *indirectly*. We measure very accurate maps or satellite pictures. The countries and oceans themselves are not measured.

Countries, oceans, and deserts have irregular boundaries. One way that scientists measure areas is to count grid squares. They place a transparent grid of squares on a map. Then they count the squares and parts of squares that cover the region being measured. The squares are drawn to the same scale as the map.

There are several reasons that it is hard to measure the following regions accurately:

Area of a country. Sometimes people disagree about the exact boundary of a country. So the area may depend on which boundary is being used.

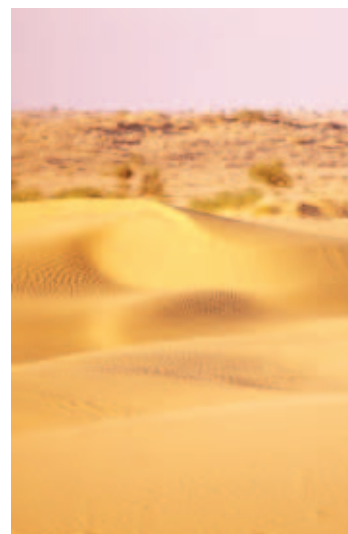
Area of a lake, sea, or ocean. Some bodies of water have shorelines that shift greatly depending on the level of the water. So it is very hard to measure accurately the area that is covered by water.

The world's oceans are not separated from one another by shorelines. Sometimes people disagree on the boundaries between the oceans. This makes it difficult to measure the areas of oceans.

Area of a desert. Measuring desert areas is very hard. Desert boundaries may change because the climate changes. When land is cultivated, a desert boundary shifts. Also, scientists do not agree on what a desert actually is. Some define a desert as land that cannot be used for raising crops. Others define it as land that cannot be used for either crops or grazing. There are deserts that are hot and dry only part of the year. Some deserts are dry all year because it is very hot. Other deserts are dry all year because it is very cold and the water is always frozen. Very cold deserts are known as *tundras*.



The shoreline of a body of water may shift greatly during different seasons of the year and over the years.



Desert boundaries often change because of climate changes.

Climate and Elevation of Capital Cities

The **climate** of a city or a country refers to the average weather conditions in that place. Two kinds of weather data are shown on the opposite page: temperature and rainfall. Elevation data are also shown.

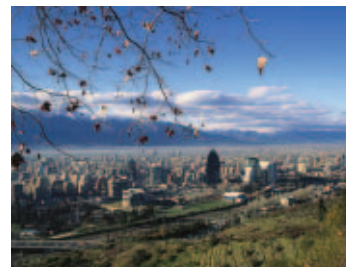
Temperature Data

Average temperatures are given in degrees Fahrenheit (°F).

- ◆ Each column lists average temperatures for a 3-month period.
- ◆ The first number is the average high temperature for that period. The second number is the average low temperature for that period.

Examples

The average high and low temperatures for Cairo, Egypt, for March through May are about 81°F and 59°F. The highest temperature listed for Santiago, Chile, is 84°F. This is the average high temperature for December through February. Santiago is in the Southern Hemisphere. Countries south of the equator have summer in December, January, and February.



Santiago, Chile

Rainfall Data

Average rainfall is given in inches per month. All moisture that falls as rain or as snow is counted as rainfall. When snow falls, a sample is melted and the depth of the water is measured.

Examples

The average rainfall in Monrovia, Liberia, is 30.7 inches *per month* from June through August. That's about 1 inch per day, on average. The average rainfall in Rome, Italy, is 1 inch *per month* from June through August. The total rainfall during these 3 months is about 1 in. + 1 in. + 1 in., or 3 inches.

Elevation Data

The table also lists the elevation for each capital city. A city's **elevation** is its height above sea level.

Examples

The highest elevation listed is 13,166 feet for La Paz, Bolivia. The elevation listed for Amsterdam, Netherlands, is 7 feet. Amsterdam is nearly at sea level.



Amsterdam, Netherlands

Capital, Country		Average Monthly Temps (°F) in Capital City (High/Low)				Average Monthly Rainfall (in.) in Capital City				Elevation of capital (ft)
		Dec/Feb	Mar/May	Jun/Aug	Sept/Nov	Dec/Feb	Mar/May	Jun/Aug	Sept/Nov	
Region 1	Algiers, Algeria	62/44	69/49	85/65	77/57	4.2	2.3	0.3	3.0	82
	Cairo, Egypt	67/50	81/59	93/71	83/64	0.2	0.1	0.0	0.0	243
	Addis Ababa, Ethiopia	69/53	72/57	66/55	68/53	0.9	3.2	8.9	2.9	7,724
	Accra, Ghana	87/78	87/79	81/75	84/76	0.8	3.7	3.5	1.8	226
	Nairobi, Kenya	77/58	77/60	72/55	76/58	2.2	4.6	0.7	2.5	5,327
	Monrovia, Liberia	87/74	88/76	81/74	84/75	2.8	10.9	30.7	23.0	59
	Rabat, Morocco	63/48	68/53	78/64	74/58	3.3	1.9	0.1	1.8	246
	Dakar, Senegal	76/66	76/67	84/76	85/76	0.1	0.0	4.7	2.3	79
	Pretoria, South Africa	81/66	75/57	67/46	78/60	4.4	2.0	0.3	2.6	4,265
	Harare, Zimbabwe	78/63	76/58	70/49	80/59	7.0	2.1	0.1	1.7	4,930
Region 2	Paris, France	44/35	57/43	73/56	59/46	2.0	1.8	2.3	2.1	315
	Athens, Greece	56/45	67/53	87/71	73/60	2.0	1.1	0.3	1.6	69
	Budapest, Hungary	38/27	60/42	78/58	58/43	1.7	2.0	2.3	2.1	607
	Reykjavik, Iceland	36/28	42/34	54/46	44/36	3.2	2.3	2.1	3.2	200
	Rome, Italy	56/40	64/48	81/65	71/55	3.3	2.4	1.0	3.9	10
	Amsterdam, Netherlands*	42/34	54/41	68/54	56/45	2.5	2.3	2.6	3.4	7
	Oslo, Norway	32/20	50/35	69/53	49/37	1.9	1.5	3.2	2.9	56
	Warsaw, Poland	34/25	54/38	72/54	53/40	1.2	1.6	2.8	1.6	351
	Madrid, Spain	52/34	65/43	87/59	69/47	1.8	1.6	0.6	1.8	1,909
	London, United Kingdom	46/35	55/39	69/52	58/43	2.7	2.2	2.1	2.9	203
Region 3	Buenos Aires, Argentina	82/63	72/53	60/42	71/51	3.8	3.5	2.2	3.3	66
	La Paz, Bolivia	56/39	57/35	55/28	58/35	4.3	1.6	0.4	1.6	13,166
	Brasilia, Brazil	81/64	81/61	80/53	83/62	10.6	5.1	0.2	5.7	3,480
	Santiago, Chile	84/53	72/45	59/38	71/45	0.1	1.0	2.7	0.6	1,555
	Bogota, Columbia	66/44	66/48	64/47	65/47	2.2	4.0	2.0	4.0	8,357
	Quito, Ecuador	66/50	66/51	67/49	67/49	4.6	5.9	1.2	4.1	9,223
	Asuncion, Paraguay	90/72	82/66	73/57	82/61	5.6	5.3	2.3	4.8	331
	Lima, Peru	78/68	76/66	67/60	69/61	0.0	0.0	0.1	0.1	43
	Montevideo, Uruguay	81/61	71/53	59/43	68/50	2.9	3.7	3.1	2.8	72
	Caracas, Venezuela	78/64	82/68	80/68	80/68	1.0	1.7	4.2	4.1	2,739
Region 4	Canberra, Australia	81/54	67/44	54/33	67/42	2.2	2.1	1.7	2.3	1,873
	Dhaka, Bangladesh	78/61	88/76	88/81	86/75	0.4	5.8	14.1	5.9	30
	Beijing, China	37/20	66/46	85/69	64/46	0.2	0.8	6.2	1.1	180
	New Dehli, India	71/50	93/71	95/81	88/68	0.7	0.5	6.2	1.9	708
	Tehran, Iran	45/33	69/53	95/75	74/58	1.5	1.1	0.1	0.5	3,906
	Tokyo, Japan	50/37	63/50	81/71	70/59	2.3	5.0	6.0	6.6	26
	Moscow, Russia	23/13	49/33	69/53	45/33	1.4	1.6	2.9	2.0	623
	Bangkok, Thailand	89/72	93/79	90/79	89/76	0.6	3.8	6.5	8.0	66
	Ankara, Turkey	38/23	59/37	80/53	64/39	1.5	1.5	0.6	0.9	3,113
	Hanoi, Vietnam	68/59	80/71	90/80	82/72	1.0	3.6	12.0	9.4	19
Region 5	Ottawa, Canada	24/9	51/34	76/58	53/38	2.6	2.7	3.2	3.0	374
	San Jose, Costa Rica	75/58	80/61	78/62	78/60	0.8	3.9	9.1	9.8	3,021
	Havana, Cuba	79/64	84/68	89/74	85/71	2.3	2.9	5.6	5.3	194
	San Salvador, El Salvador	83/66	86/69	83/69	82/68	0.2	2.3	12.2	7.6	2,037
	Guatemala City, Guatemala	73/56	78/60	74/61	73/60	0.2	2.6	8.9	5.6	4,917
	Port-au-Prince, Haiti	87/75	88/78	92/80	89/79	1.6	5.9	4.1	5.4	95
	Kingston, Jamaica	86/74	87/76	90/79	88/78	1.2	2.2	3.3	5.2	30
	Mexico City, Mexico	71/45	78/53	75/56	73/52	0.3	1.1	4.7	2.2	7,328
	Panama City, Panama	89/76	89/78	86/77	86/77	2.1	3.9	7.8	9.5	43
	Washington D.C., United States	45/30	66/46	86/68	69/51	2.8	3.4	3.8	3.1	10

*Parts of Amsterdam are as much as 13 ft below sea level.

Literacy and Standard of Living Data

The table on the opposite page lists information about TVs, radios, telephones, and cars. Each number in the table shows what you would expect to find for a group of 1,000 people.

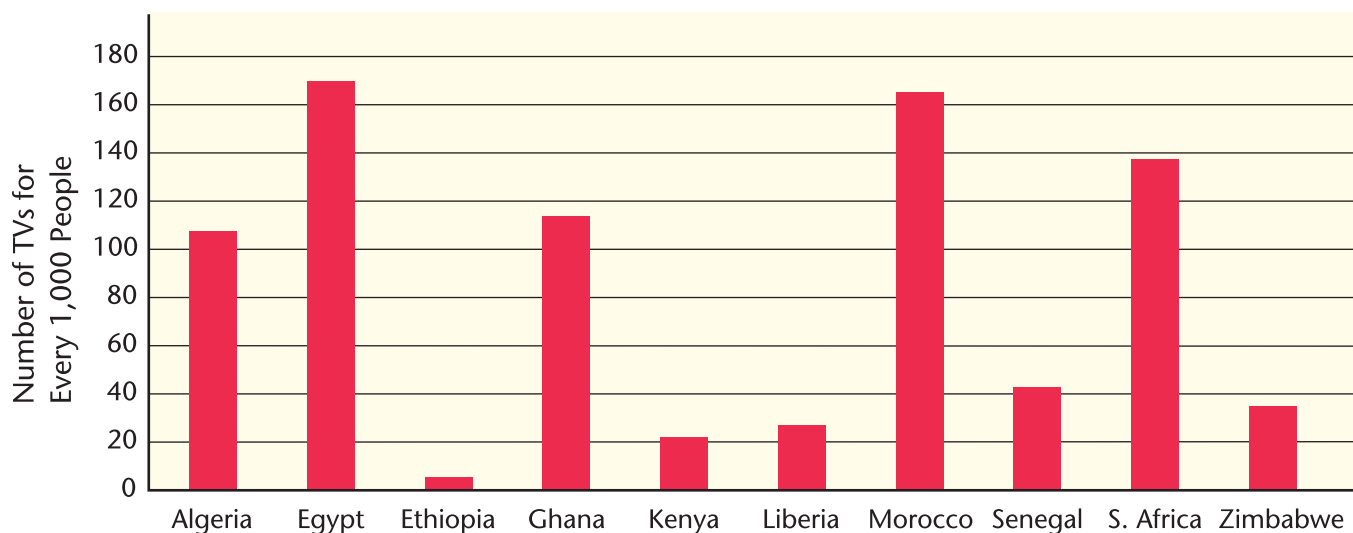
Examples

There are only 242 radios in Algeria for every 1,000 people. But there are 2,116 radios in the U.S. for every 1,000 people. That's more than 2 radios for each person in the U.S. Many people in the U.S. have more than 1 radio.

You can use the data table to draw graphs and compare countries.

Example

This bar graph shows TV data for Region 1 (Africa). The graph shows that Algeria, Egypt, Ghana, Morocco, and South Africa all have many more TVs per 1,000 people than the other five countries have.



The last column in the table tells about the level of education in each country. A **literate** person is one who can read and write. The **percent of literacy** is the number of people out of 100 who are literate.

Example

In Mexico, 92% of the people are literate. This means that about 92 of every 100 people can read and write.



African soccer fans watching a game on TV



Literacy is the ability to read *and* write.

		Per 1,000 People				
Country		Televisions	Radios	Telephones*	Cars	Percent Literate**
Region 1	Algeria	107	242	68	54	70
	Egypt	170	317	114	22	58
	Ethiopia	5	185	6	1	43
	Ghana	115	680	15	4	75
	Kenya	22	216	10	8	85
	Liberia	26	329	2	5	58
	Morocco	165	247	37	38	52
	Senegal	41	141	21	10	40
	South Africa	138	355	107	93	86
	Zimbabwe	35	389	24	43	91
Region 2	France	620	946	561	465	99
	Greece	480	475	488	321	98
	Hungary	447	690	369	247	99
	Iceland	505	1,075	649	541	100
	Italy	492	880	458	561	99
	Netherlands	540	980	613	375	99
	Norway	653	917	721	409	100
	Poland	387	522	318	272	100
	Spain	555	331	437	451	98
	United Kingdom	661	1,437	579	408	99
Region 3	Argentina	293	681	204	138	97
	Bolivia	118	675	69	36	87
	Brazil	333	434	211	63	86
	Chile	240	354	221	44	96
	Colombia	279	539	208	18	93
	Ecuador	213	406	114	24	93
	Paraguay	205	182	44	40	94
	Peru	147	273	65	27	91
	Uruguay	531	603	278	192	98
	Venezuela	185	296	112	57	93
Region 4	Australia	716	1,391	542	494	100
	Bangladesh	7	50	5	1	43
	China	291	342	202	5	86
	India	75	120	46	5	60
	Iran	154	265	216	14	79
	Japan	719	956	558	420	100
	Russia	421	417	247	148	100
	Thailand	274	234	102	41	96
	Turkey	328	510	274	66	87
	Vietnam	184	107	53	1	94
Region 5	Canada	709	1,038	615	519	97
	Costa Rica	229	774	253	86	96
	Cuba	248	352	51	1	97
	El Salvador	191	478	114	22	80
	Guatemala	61	79	59	45	71
	Haiti	5	53	17	12	53
	Jamaica	191	796	164	52	88
	Mexico	272	329	142	105	92
	Panama	13	299	129	74	93
	United States	844	2,116	620	757	97

*Includes telephone main lines, but not cellular telephones.

**Data are hard to measure and may vary greatly.

Population Data

The table on the opposite page lists population information for each country.

Life expectancy is the average number of years a person can expect to live. It is listed separately for males and females because women usually live longer than men.

Examples In the United States, women live an average of 80 years, and men live an average of 75 years. In Russia, women live an average of 13 years longer than men. Zimbabwe is the only country where men on average live longer than women.



Farming couple in Siberia

The **percent of people ages 0–14** is the number of people out of every 100 who are very young.

Examples In Liberia, 43% of the people are 14 or younger. That's nearly 50%, or one-half, of the people who are very young. In Italy, only 14% of the people are very young. Italy's fraction of very young people is much smaller than Liberia's fraction.

Percent urban is the number of people out of 100 who live in towns or cities. **Percent rural** is the number of people out of 100 who live in the country. These two percents add up to 100%.

Example In the United States, 80 of 100 people live in towns or cities, while 20 out of 100 people live in the country.
 $80\% + 20\% = 100\%$

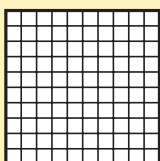


U.S. farmer feeding cattle

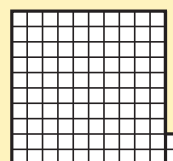
The population in most countries grows larger each year. The **percent population growth** is one way to measure how fast the population is growing.

Example The population in Haiti increases by 2% each year.

For every 100 Haitians at the beginning of the year,



there are 102 Haitians at the end of the year.



Country		Percent of Population Ages 0–14		Life Expectancy		Percent Population Growth in 1 Year	Percent Urban	Percent Rural
		Males	Females	Males	Females			
Population Data	Region 1	Algeria	34	71	74	1.3	59	41
		Egypt	34	68	73	1.9	42	58
		Ethiopia	47	40	42	1.9	16	84
		Ghana	40	55	57	1.4	45	55
		Kenya	41	45	45	1.2	39	61
		Liberia	43	47	49	2.7	47	53
		Morocco	34	68	73	1.7	58	42
		Senegal	44	55	58	2.5	50	50
		South Africa	32	44	44	−0.2	57	43
		Zimbabwe	38	39	37	0.7	35	65
	Region 2	France	19	76	83	0.3	76	24
		Greece	15	76	82	0.0	61	39
		Hungary	16	68	77	−0.3	65	35
		Iceland	23	78	82	0.7	93	7
		Italy	14	77	83	−0.1	92	8
		Netherlands	18	76	81	0.3	66	34
		Norway	20	77	82	0.2	79	21
		Poland	18	70	79	0.1	62	38
		Spain	15	76	83	0.1	77	23
		United Kingdom	19	76	81	0.1	89	11
	Region 3	Argentina	26	72	80	1.0	90	10
		Bolivia	38	63	68	1.7	63	37
		Brazil	28	68	76	1.1	83	17
		Chile	27	73	80	1.0	87	13
		Colombia	32	68	75	1.6	77	23
		Ecuador	35	73	79	1.9	62	38
		Paraguay	39	72	77	2.5	57	43
		Peru	34	68	71	1.5	74	26
		Uruguay	24	73	79	0.5	93	7
		Venezuela	32	71	77	1.4	88	12
	Region 4	Australia	20	77	83	0.5	92	8
		Bangladesh	34	62	62	2.2	24	76
		China	24	70	74	0.6	39	61
		India	33	63	65	1.4	28	72
		Iran	32	68	71	1.2	67	33
		Japan	15	78	85	0.1	79	21
		Russia	17	60	73	−0.6	73	27
		Thailand	23	70	74	0.9	32	68
		Turkey	28	70	75	1.1	66	34
		Vietnam	33	68	73	1.3	26	74
	Region 5	Canada	19	77	84	0.3	80	20
		Costa Rica	31	74	79	1.5	61	39
		Cuba	21	75	79	0.5	76	24
		El Salvador	37	67	75	2.2	60	40
		Guatemala	42	64	66	2.8	46	54
		Haiti	40	51	53	2.0	38	62
		Jamaica	29	74	78	1.2	67	33
		Mexico	33	72	78	1.7	76	24
		Panama	30	70	75	1.4	69	31
		U.S.	21	75	80	0.6	80	20

Fascinating Facts

Smallest Countries by Population

Country	Area (sq miles)	Population
Vatican City	0.17	900
Tuvalu	10	11,000
Nauru	8	13,000
Palau	177	20,000
San Marino	24	28,000
Monaco	0.75	32,000
Liechtenstein	62	33,000

Largest Cities by Population

City, Country	Population
Tokyo, Japan	34,450,000
Mexico City, Mexico	18,066,000
New York City, U.S.	17,846,000
Sao Paulo, Brazil	17,099,000
Mumbai (Bombay), India	16,086,000
Calcutta, India	13,058,000
Shanghai, China	12,887,000

Languages with the Most Speakers

Language	Speakers (in millions)	Countries
Chinese	873	16
Spanish	322	43
English	309	107
Hindi	180	17
Portuguese	177	33
Bengali	171	9
Russian	145	31
Japanese	122	25

Cellular Telephone Use

Country	Number of Cellular Telephone Subscriptions (in millions)	Subscriptions per 100 People
Taiwan	25.1	110.8
Luxembourg	0.5	106.1
Italy	55.9	101.8
Iceland	0.3	96.6
Israel	6.3	95.5
Spain	37.5	91.6
United Kingdom	49.7	84.1
Greece	8.9	78.0
Japan	86.7	68.0
United States	158.7	54.3
Canada	13.2	41.7
Turkey	27.9	40.8
South Africa	16.9	36.4
World	1,340.7	21.9



Taiwan has the highest subscription rate for cellular telephone use of all countries.

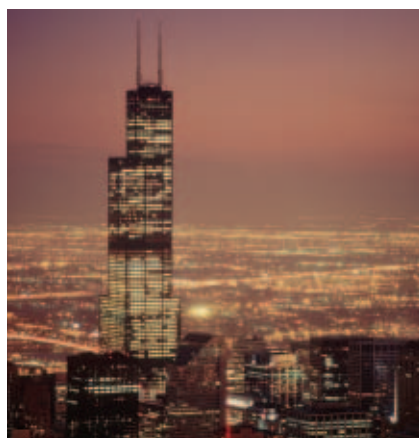
World's Tallest Buildings

Name	Place	Year Built	Height (feet)	Stories
Taipei 101	Taipei, Taiwan	2004	1,670	101
Petronas Towers, I and II	Kuala Lumpur, Malaysia	1998	1,483	88
Sears Tower	Chicago, United States	1974	1,450	110
Jin Mao Bldg.	Shanghai, China	1999	1,381	88
Two International Finance Centre	Hong Kong, China	2003	1,362	88
CITIC Plaza	Guangzhou, China	1996	1,283	80
Shun Hing Square	Shenzhen, China	1996	1,260	69
Empire State Building	New York, United States	1931	1,250	102
Central Plaza	Hong Kong, China	1992	1,227	78
Bank of China	Hong Kong, China	1989	1,209	72

For more information and ongoing updates, go to the Web site
http://en.wikipedia.org/wiki/World's_tallest_structures.



Taipei 101



Sears Tower



English Channel Tunnel

World's Longest Railway Tunnels

Tunnel	Place	Year Built	Length (miles)
Seikan	Japan	1988	33.5
English Channel Tunnel	UK–France	1994	31.3
Iwate-ichinohe	Japan	2002	16.0
Dai-shimizu	Japan	1982	13.8
Simplon No. I and II	Switzerland–Italy	1906, 1922	12.3
Vereina	Switzerland	1999	11.8
Kanmon	Japan	1975	11.6
Apennine	Italy	1934	11.5

Largest Oceans and Seas

Name	Area (sq miles)	Average Depth (feet)
Pacific Ocean	64,186,300	12,925
Atlantic Ocean	33,420,000	11,730
Indian Ocean	28,350,500	12,598
Arctic Ocean	5,105,700	3,407
South China Sea	1,148,500	4,802
Caribbean Sea	971,400	8,448
Mediterranean Sea	969,100	4,926
Bering Sea	873,000	4,893
Gulf of Mexico	582,100	5,297
Okhotsk Sea	537,500	3,192

Longest Rivers

Name	Location	Length (miles)
Nile	Africa	4,160
Amazon	S. America	4,000
Chang (Yangtze)	Asia	3,964
Huang (Yellow)	Asia	3,395
Ob-Irtysh	Asia	3,362
Congo	Africa	2,900
Lena	Asia	2,734
Niger	Africa	2,590
Parana	S. America	2,485
Mississippi	N. America	2,340

Largest Deserts

Name	Location	Area (sq miles)
Sahara	Africa	3,500,000
Gobi	Asia	500,000
Libyan	Africa	450,000
Patagonia	S. America	300,000
Rub al Khali	Asia	250,000
Kalahari	Africa	225,000
Great Sandy	Australia	150,000
Great Victoria	Australia	150,000
Chihuahua	N. America	140,000

Largest Freshwater Lakes

Name	Location	Area (sq miles)
Superior	N. America	31,700
Victoria	Africa	26,828
Huron	N. America	23,000
Michigan	N. America	22,300
Tanganyika	Africa	12,700
Baykal	Asia	12,162
Great Bear	N. America	12,096
Malawi (Nyasa)	Africa	11,150

Tallest Mountains

Name	Location	Height (feet)
Everest	Nepal-Tibet	29,028
K-2 (Godwin-Austen)	Kashmir	28,250
Kanchenjunga	Nepal-India	28,208
Lhotse I (Everest)	Nepal-Tibet	27,923
Makalu I	Nepal-Tibet	27,824
Lhotse II (Everest)	Nepal-Tibet	27,560
Dhaulagiri I	Nepal	26,810
Manaslu I	Nepal	26,760
Cho Oyu	Nepal-Tibet	26,750
Nanga Parbat	Kashmir	26,660

Highest/Lowest Elevation Points

Continent	Highest/Lowest Point	Elevation (feet)
Africa	Mt. Kilimanjaro, Tanzania Lake Assal, Djibouti	19,340 -512
Antarctica	Vinson Massif Bentley Subglacial Trench	16,864 -8,327
Asia	Mt. Everest, Nepal-Tibet Dead Sea, Israel-Jordan	29,028 -1,312
Australia	Mt. Kosciusko, New S. Wales Lake Eyre, South Australia	7,310 -52
Europe	Mt. El'brus, Russia Caspian Sea, Russia-Azerbaijan	18,510 -92
N. America	Mt. McKinley (Denali), Alaska Death Valley, California	20,320 -282
S. America	Mt. Aconcagua, Argentina Valdés Peninsula, Argentina	22,834 -131

Temperature and Rainfall Extremes

Hottest single days	136°F, Azizia (Alaziziyah) Libya 134°F Death Valley, California
Hottest yearly average	95°F, Dalol Depression, Ethiopia
Coldest single days	−129°F, Vostok, Antarctica −90°F, Oimekon, Russia
Coldest yearly average	−72°F, Plateau Station, Antarctica
Highest average yearly rainfall	467 in., Mawsynram, India 460 in., Mt. Waialeale, Kauai, Hawaii
Lowest average yearly rainfall	0.03 in., Arica, Chile Less than 0.1 in., Wadi Half, Sudan



Colombia has 1,700 known species of birds.

Top Countries for Mammals

Country	Continent	Number of Known Species
Mexico	N. America	491
Peru	S. America	460
Indonesia	Asia	457
Congo, Dem. Rep.	Africa	450
United States	N. America	432
Brazil	S. America	417
Cameroon	Africa	409
China	Asia	400
Colombia	S. America	359
Kenya	Africa	359

Top Countries for Birds

Country	Continent	Number of Known Species
Colombia	S. America	1,700
Peru	S. America	1,541
Indonesia	Asia	1,530
Brazil	S. America	1,500
Ecuador	S. America	1,388
Venezuela	S. America	1,340
China	Asia	1,103
Congo, Dem. Rep.	Africa	929
India	Asia	926
Argentina	S. America	897

Top Countries for Reptiles and Amphibians

Country	Continent	Number of Known Species
Colombia	S. America	1,277
Brazil	S. America	1,072
Mexico	N. America	1,014
Australia	Australia	953
Ecuador	S. America	806
Indonesia	Asia	799
Peru	S. America	736
China	Asia	630
India	Asia	599
United States	N. America	550

Top Countries for Flowering Plants

Country	Continent	Approximate Number of Known Species
Brazil	S. America	55,000
Colombia	S. America	50,000
China	Asia	30,000
Indonesia	Asia	27,500
Mexico	N. America	25,000
South Africa	Africa	23,000
Venezuela	S. America	20,000
Ecuador	S. America	18,250
Peru	S. America	17,000
Bolivia	S. America	17,000

National Flags

Region 1

Algeria



Egypt



Ethiopia



Ghana



Kenya



Liberia



Morocco



Senegal



South Africa



Zimbabwe



Region 2

France



Greece



Hungary



Iceland



Italy



Netherlands



Norway



Poland



Spain



United Kingdom



Region 3

Argentina



Bolivia



Brazil



Chile



Colombia



Ecuador



Paraguay



Peru



Uruguay



Venezuela



Region 4

Australia



Bangladesh



China



India



Iran



Japan



Russia



Thailand



Turkey



Vietnam



Region 5

Canada



Costa Rica



Cuba



El Salvador



Guatemala



Haiti



Jamaica



Mexico



Panama



United States



Mancala

Mancala is a 3,000-year-old game of strategy. It is popular throughout Africa and Asia. The game has a variety of names, and the rules vary slightly from country to country. The game is usually played using a wooden board with 12 cups carved into it. Seeds or beans are used as counters.

Materials □ an egg carton or gameboard with 12 cups
 □ 48 counters, beans, or seeds

Players 2

Directions

Players sit at opposite ends of the board. Each player places four counters in each of the six cups on his or her side of the board. (See diagram.)

To begin, Player 1 picks up all of the counters from one of the six cups on his or her side. Beginning with the next cup, Player 1 drops the four counters one at a time into each consecutive cup, moving *counterclockwise* around the board.

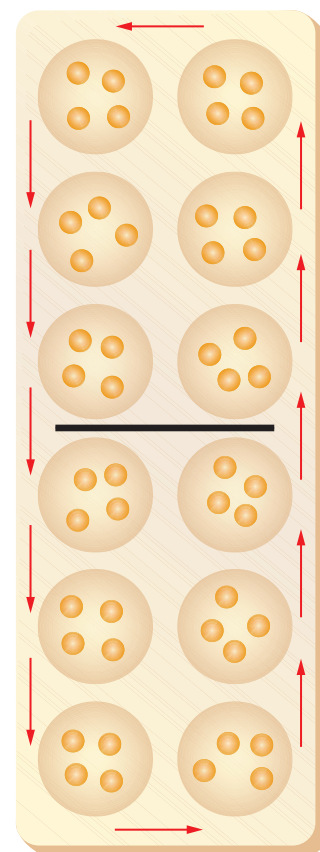
Player 2 does the same thing with counters from one of the cups on his or her side of the board. (Players always begin by picking up counters from a cup on their side of the board).

A player *captures* counters if *both* of these conditions hold true:

1. The last counter the player drops in a cup lands on the other player's side of the board.
2. It lands in a cup with one or two counters already there.

When this happens, the player picks up all the counters in that cup. These are set aside for counting at the end of the game. Players may only capture counters from their opponent's side of the board.

Play continues until one player has no counters left on his or her side of the board. At that time, players tally the number of counters captured, plus the number of counters remaining on their side of the board. The player with the most counters wins.



The gameboard at the start of play



Move counterclockwise as you drop counters into the cups.

Tchuka Ruma

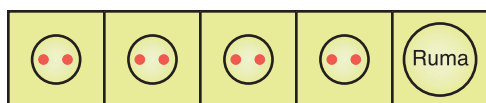
This is a solitaire version of *Mancala*.

Materials ☐ an egg carton or gameboard with 5 cups
 ☐ 8 counters

Player 1

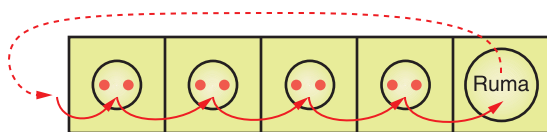
Directions

The player places 2 counters in each of the first 4 cups. The cup on the far right remains empty. The empty cup is called the *Ruma*.



The gameboard at the start of play

The player takes all of the counters from any cup and drops them one at a time into each consecutive cup, moving from left to right. If there are still counters in the player's hand after placing a counter in the Ruma, the player goes back to the cup at the far left and continues.



Move in the direction of the arrows as you drop counters into the cups.

If there are counters in the cup where the last counter is dropped, the player takes all of the counters (including the one dropped) and continues as before. The player drops the counters one at a time into consecutive cups, beginning with the next cup to the right. The player always moves from left to right. If there are still counters in the player's hand after placing a counter in the Ruma, the player returns to the cup at the far left and continues play.

If the last counter is dropped in the Ruma, the player can select *any* cup to begin the next move. The player takes all of the counters from this cup and drops them into other cups in the usual way.

If the last counter is dropped in a cup that does *not* have counters and is *not* the Ruma, the game ends and the player loses.

The player wins if he or she can get all of the counters into the Ruma.

Seega

This is a version of a traditional Egyptian game that is popular among young Egyptians today.

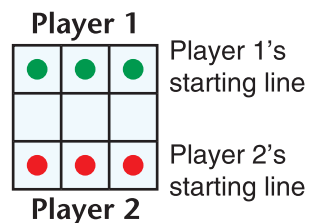
Materials □ Seega Game Mat (*Math Masters*, p. 503)
 □ 6 markers (3 each of two colors)

Players 2

Directions

Each player takes 3 markers of the same color. To begin, players place their markers on the starting lines at the ends of the game mat. (See diagram.)

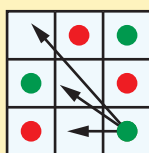
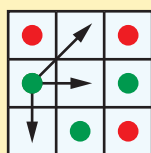
Players take turns moving one of their markers one or two squares.



- ◆ A marker can be moved to any open square that is next to it. Diagonal moves are OK.
- ◆ A marker can be moved two squares in any direction to an open square. Diagonal moves are OK, but a change in direction during the move is *not* allowed. Jumping over another marker is also *not* allowed.

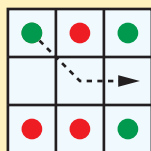
Examples

Moves allowed:

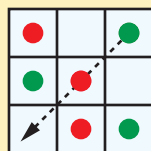


Examples

Moves not allowed:



May not change direction.



May not jump a marker.

The first player to get his or her markers in a straight line is the winner. The line may be horizontal, vertical, or diagonal, but it may not be the player's starting line.

Sz'kwa

This is a Chinese children's game. Its name means "the game of four directions." In China, the game mat is often marked in the dirt or gravel, and pebbles, nuts, or shells are used as markers.

Materials □ Sz'kwa Game Mat (*Math Masters*, p. 505)
 □ 40 markers (20 each of two different colors)

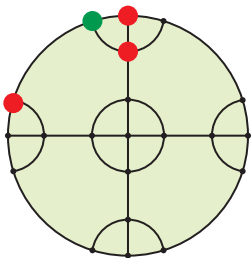
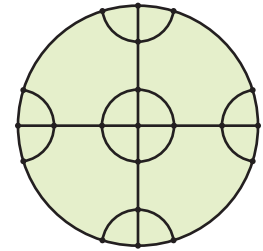
Players 2

Directions

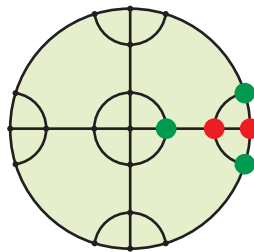
Each player takes 20 markers of the same color.

The game mat has 21 places where lines meet (called "intersections"). Players take turns. At each turn, a player places one marker on any intersection that is not already covered by a marker.

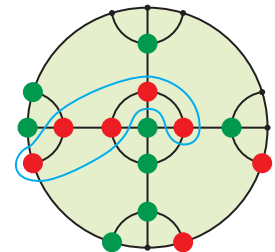
A marker is captured when it is surrounded by the opponent's markers. The captured marker is removed from the mat and kept by the opponent.



Green marker captured.

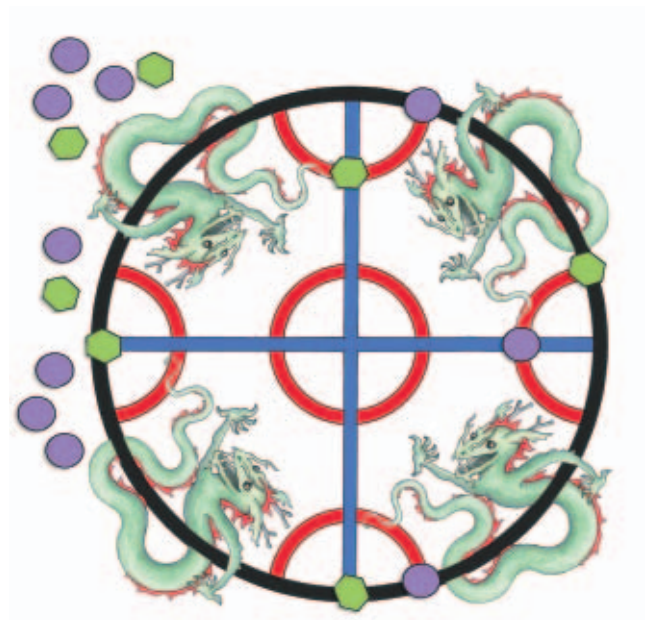


Two red markers captured.



Five red markers captured.

Play continues until players run out of markers or until there is no place left on the mat to put a marker without its being captured. The player who holds more captured pieces at this time is the winner.



Alleyway

This game is popular in Eastern Europe. The game mat is shaped like a semicircle with 25 numbered spaces. Space 13 is left open and is called the “alleyway.”

Materials ☐ Alleyway Game Mat (*Math Masters*, p. 456)
☐ 1 marker for each player
☐ 1 die

Players any number

Directions

Players place their markers in the Start space. They take turns rolling the die and moving their markers. A player moves his or her marker forward on the game mat by as many spaces as there are dots showing on the die.

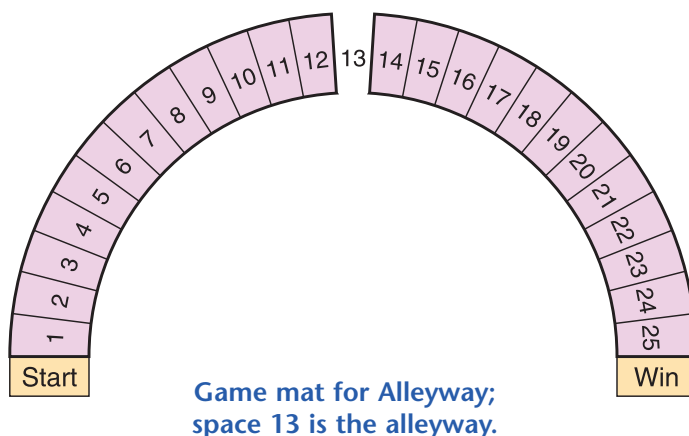
A player’s marker may land on a space already occupied by another player’s marker. If that happens, the *opponent’s* marker must be moved back.

- ◆ If the marker is in one of the spaces numbered 1–13, the opponent’s marker must move back to the Start space.
- ◆ If the marker is in one of the spaces numbered 14–25, the opponent’s marker must move back 2 spaces.

If a marker lands on another player’s marker when it is moved back, then the marker it lands on must also be moved back. Use the rules given above for moving it back.

If a player’s marker lands exactly on space 25, it must go back to space 14.

The winner is the first person to get *beyond* space 25.



Patolli

The board game *Patolli* has been played in Mexico since at least 200 B.C. The game takes its name from the Aztec word for bean—*patolli*, which means common bean or kidney bean. We do not have any record of the exact game rules. But these rules will allow you to play a game that should be similar to the ancient game.

Materials

- *Patolli* Game Mat (*Math Masters*, p. 495)
- 5 flat beans (such as limas)
Mark one side of each bean with a dot.
- 12 counters:
 - for 2 players, 6 counters per player
 - for 3 players, 4 counters per player
 - for 4 players, 3 counters per player

Each player should have counters of a different color from the other players.

Players 2–4

Directions

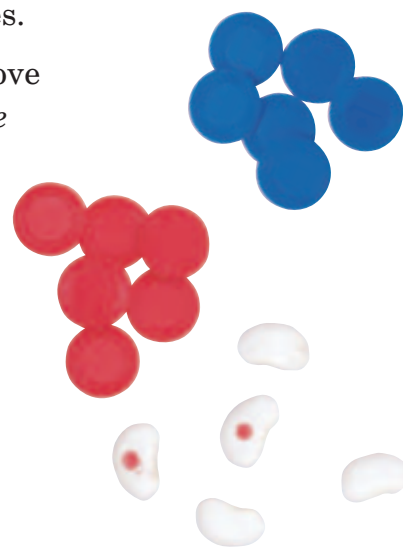
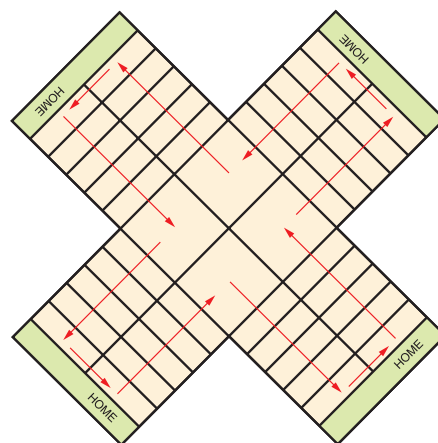
Players each place a counter on the HOME space nearest to them. Each player tosses the 5 beans. The player with the greatest number of dots showing goes first.

Players take turns tossing the beans and moving their counters.

- ◆ A counter is moved the same number of spaces as the number of dots showing on the beans. If all 5 dots are showing, the count is doubled, and the player moves the counter 10 spaces.
- ◆ A player who has more than one counter on the mat may move any one of these counters. But the player may only move *one* counter during a turn.
- ◆ If exactly one dot is showing, the player may place a new counter on his or her HOME space.

A counter is removed from the mat when it comes back to a player's HOME space after going all the way around the mat. The counter must land exactly on HOME. If a counter cannot land exactly on HOME, that counter may not be moved.

The first player to move all of his or her counters around the mat and back to HOME space wins the game.



Beans and counters for a 2-player game

Sprouts

John Conway, professor of mathematics at Princeton University, invented this paper-and-pencil game in 1967.

Materials □ paper and pencil

Players 2

Directions

On a piece of paper, draw 3 dots that are widely spaced apart. You can start with more dots, but 3 dots is a good number to use when learning how to play.

Players take turns drawing a line (curved or straight) connecting any two dots, or joining a dot to itself. A player completes his or her turn by drawing another dot anywhere on the new line.

These rules must be followed when drawing the connecting lines:

- ◆ No line may cross itself.
- ◆ No line may cross any other line that has been drawn.
- ◆ No line may be drawn through a dot.
- ◆ A dot can have no more than 3 lines coming from it. A good way to keep track of this is to draw a box around any dot that has 3 lines coming from it. (See below.)

The winner is the last player who is able to draw a connecting line.

Sample Play (for an incomplete game)

