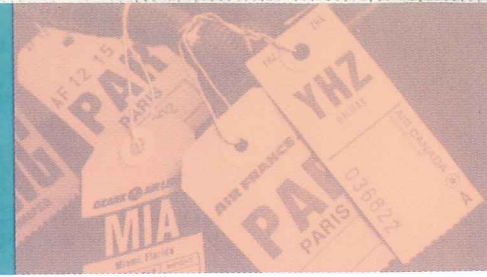


## 11-3 FLYING SAVES TIME AND SOMETIMES MONEY



**R**amón, like Sylvia and Betty, has taken family vacations by car. He has always enjoyed visiting new places, especially those that played a part in history, such as the Alamo, and those that have great natural beauty, such as Niagara Falls. He loves art and frequently sketches what he sees.

Now Ramón goes to college and sometimes flies to school. For this reason he has become familiar with airline timetables and air fares.

He lives in Chicago and goes to school in New Orleans. He occasionally visits friends in other parts of the country.

It takes some practice to read airline schedules. Comparing times and connections can be tricky. In addition, there is quite a range in air fares. Ramón, like many people, depends on a travel agent to make arrangements. But there are always several options, and planning ahead can often save time and money.

**OBJECTIVES:** *In this lesson, we will help Ramón to:*

- *Understand what is involved in air travel.*
- *Make travel plans based on airline schedules.*
- *Compare the costs of traveling by air and by car.*

## MAKING AIR TRAVEL PLANS

Ramón likes to fly because it saves time. When school is out, he wants to get home. When he is home on vacation, he likes to stay until the last possible minute. Nevertheless, he has learned to plan ahead. He realizes that a lot of students go back to school at the same time, so it is important to buy a ticket early. This saves money and helps him get the most convenient flight.

As Ramón became more involved in travel matters, checking flight times and rates became a hobby. He was interested not just in his own trips, but also in how the airlines operate. He has learned to consider time zones. Airlines always list departure and arrival times according to local time. This is helpful because most people want to know the local time when they will arrive.

People also want to know the length of a trip. The airline schedule doesn't tell you this. You have to figure it out yourself, making sure to include the change in

time from the place of departure to that of arrival. A **time zone** is a geographic area that has the same time. Dallas and Chicago are in the same time zone. Dallas and Los Angeles are in different time zones.

Ramón knows that several major airlines fly many times a day to major cities. Smaller cities are often connected by smaller regional airlines. As he started checking schedules, Ramón was surprised to learn how many ways there are to get from one place to another.

The **advance purchase** of a ticket, that is, buying a ticket 14–60 days ahead can sometimes save money. On a round trip, staying over Saturday night can also save money. One-way fares are usually priced higher than round-trip fares. Some tickets that are purchased under discount arrangements are **nonrefundable**, that is, you cannot get your money back or use the tickets on another flight. Tickets for which you pay full fare can be used on flights other than the one specified on the ticket. Sometimes an airline will have special rates to attract customers.

### Ask Yourself

1. What is the obvious advantage of air travel?
2. What is a disadvantage of air travel?
3. Why is it important to check schedules and costs before taking a trip?

## ALGEBRA REVIEW

The following are distances:

*A to B*, 300 miles

*B to C*, 400 miles

*C to D*, 1000 miles

1. What is the least possible distance from *A* to *C*?
2. What is the greatest possible distance from *A* to *C*?
3. Find the distance from *B* to *D*, passing through *C*.
4. Find the least possible distance from *D* to *B*.
5. Draw a diagram showing the least possible distance from *A* to *D*.
6. What is the least distance from *A* to *D*?
7. If the distance from *A* to *C* is 700 miles and the distance from *A* to *D* is 1700 miles, draw a diagram showing the arrangement of *A*, *B*, *C*, and *D*.

# SHARPEN YOUR SKILLS

## SKILL 1

The airline schedule shown is part of one that Ramón obtained in his effort to learn about airlines. A longer schedule appears in the Reference Section.

### WINDWARD AIRLINES SCHEDULE

Leave	Arrive	Stops/Via	Rmks	10:18aO	2:45p	DFW	X67	To Oklahoma City, OK	695 mi
From Chicago, IL				11:35aO	3:55p	ATL	L	8:30aO 12:35p	DFW B
To Muscle Shoals, AL			491 mi	1:00pO	5:20p	ATL	L	10:18aO 2:15p	DFW X67
1:00pO	5:10p	ATL	L	3:14pO	7:20p	ATL	S6	12:10pO 4:15p	DFW X7
4:55pO	9:00p	ATL	D X6	3:20pM	7:45p	CVG	DX6	3:50pO 9:25p	DFW S
To Myrtle Beach, SC			743 mi	3:50pO	7:45p	CVG	D	8:45pO 12:35a	DFW S
8:10aO	1:18p	ATL	B	6:44pO	10:35p	ATL	D	To Ontario, CA	1707 mi
9:54aO	3:15p	ATL	S	8:45pO	12:59a	DFW	S	Also see Los Angeles, Burbank, Long Beach and Orange County	
Eff. May 15				To New York, NY/ Newark, NJ				8:00aO 11:55a	SLC B
1:00pO	6:59p	ATL	L					8:30aO 1:10p	DFW
6:44pO	11:45p	ATL	D X6					11:45aO 3:25p	SLC
To Naples, FL			1136 mi	E-Newark				12:10pO 4:20p	DFW X7
8:15aO	1:48p	MCO	B	7:40aM	12:25pL	CVG	X67	3:50pO 8:10p	DFW
2:10pO	7:25p	MCO	S	11:35aM	4:40pL	CVG	X67	6:15pO 9:45p	1
To Nashville, TN			401 mi	11:35aM	4:55pE	CVG	X67	To Orange County, CA	1732 mi
5:30aO	8:45a	CVG	S X67	3:20pM	7:45pE	CVG	D X6	Also see Los Angeles, Burbank, Long Beach and Ontario	
6:15aO	9:24a	CVG	S X67	5:35pO	10:20pL	CVG		6:15aO 12:05p	CVG X67
7:40aM	10:55a	CVG	X67	5:40pM	10:20pL	CVG	X67	8:00aO 12:05p	SLC B
9:57aO	12:59p	CVG	X67	Eff. May 1				8:30aO 1:15p	DFW 6
11:35aM	2:50p	CVG	X67	To Norfolk/Virginia Beach/ Williamsburg, VA				9:25aM 3:40p	CVG
3:20pM	6:55p	CVG	X6	6:30aO	12:29p	ATL	B X7	Eff. May 6	
3:50pO	6:55p	CVG	X6	9:54aO	3:10p	ATL	S	11:45aO 3:40p	SLC
5:35pO	8:43p	CVG	X67	11:35aM	3:55p	CVG	X67	3:10pO 7:35p	SLC S
5:40pM	8:43p	CVG	X67	1:00pO	6:25p	ATL	L	3:50pO 8:10p	DFW
Eff. May 1				5:35pO	9:40p	CVG		To Orlando, FL	995 mi
To Nassau, Bah			1301 mi	5:40pM	9:40p	CVG	X67	5:30aO 10:00a	CVG B X67
8:10aO	1:55p	ATL		To Oakland, CA				8:15aO 11:42a	B
To New Orleans, LA			831 mi	Also see San Francisco, San Jose				9:25aM 2:35p	CVG L6
6:15aO	10:14a	CVG	B/S X67	8:00aO	12:05p	SLC	B	Eff. May 6	
8:10aO	12:11p	ATL	B	11:45aO	3:45p	SLC		9:45aO 2:54p	ATL S
9:25aM	1:35p	CVG	L6	3:10pO	7:10p	SLC	D	9:57aO 2:35p	CVG L
Eff. May 6				6:15pO	9:55p	SLC			
9:57aO	1:35p	CVG	L						

Ramón has learned that each commercial airport in the world is assigned a three-letter code. Usually, the code makes it easy to recognize the name of the city or airport that it represents. However, sometimes the reference is not so obvious. Following are codes from the schedule and the cities that they represent. In the schedule, the codes refer to places at which the flight stops on its way to the final destination. A flight that does not make any stops is called a **non-stop flight**. A **connection** is a stop at which you must change planes in the course of your trip. If your flight is a **direct flight**, the plane will have one or more intermediate stops but you will not change planes.

ATL Atlanta, Georgia                      CVG Cincinnati, Ohio  
DFW Dallas/Ft. Worth, Texas            MCO Orlando, Florida  
SLC Salt Lake City, Utah

Other symbols in the schedule and their meanings are as follows.  
B, L, S, D Breakfast, Lunch, Snack, Dinner  
X6 and X7 The flight travels every day except 6 (Saturday) and  
7 (Sunday).

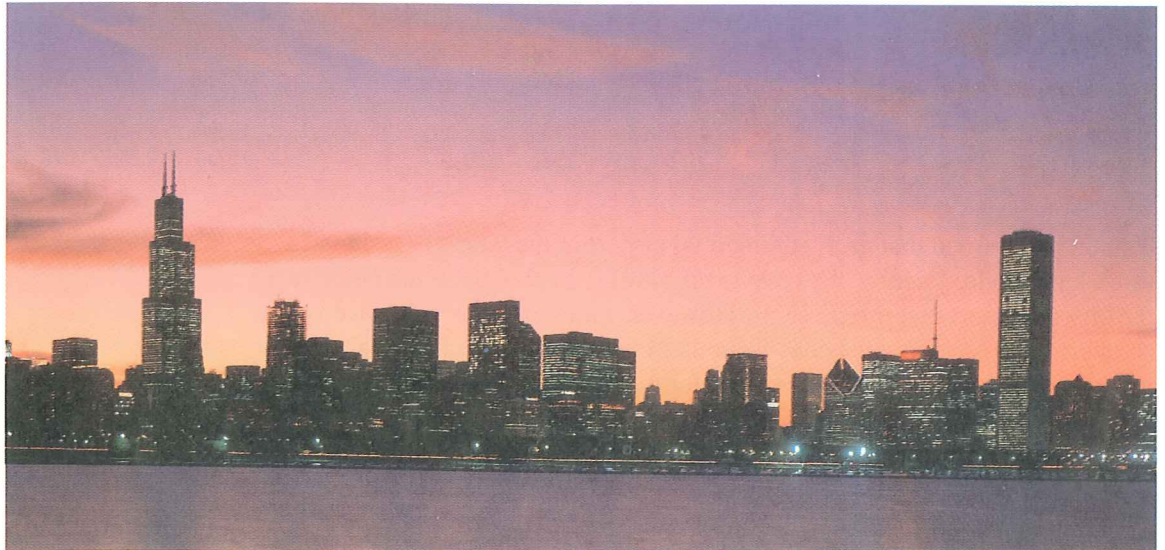
**EXAMPLE 1** Ramón is making travel arrangements to go back to school. He wants information about flights from Chicago, Illinois, to New Orleans, Louisiana. Chicago has two airports: O'Hare (O) and Midway (M).

- QUESTIONS**
1. Which flight will get him to New Orleans the earliest in the day? At what time and from which Chicago airport does the flight leave? Where does it stop along the way?
  2. Find the same information for the latest flight he can take.
  3. About how long is the time for the trip?

**SOLUTIONS**

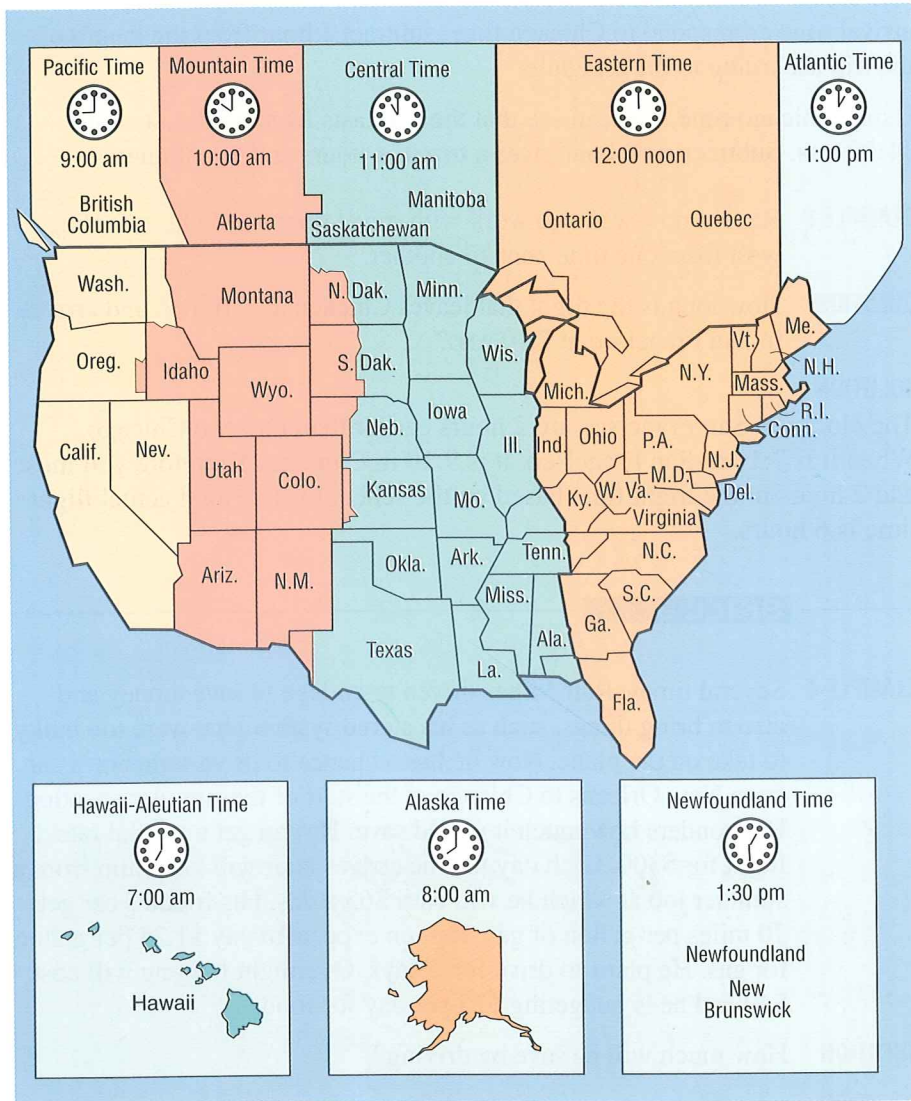
By examining the schedule we obtain the information.

1. The flight with the earliest arrival time leaves O'Hare at 6:15 A.M. and arrives in New Orleans at 10:14 A.M. It passes through Cincinnati.
2. The latest flight leaves O'Hare at 8:45 P.M. and arrives in New Orleans at 12:59 A.M. the following morning. It stops at the Dallas/Ft. Worth airport.
3. Calculating several of the times shows that the average length of the trip is about 4 hours. Since Chicago and New Orleans are both on Central Time, it is not necessary to adjust the time as calculated from the schedule.



**SKILL 2**

You cannot always calculate the length of a flight directly from the departure and arrival times. Use the time zone map as needed to determine the duration or length of flights.



**EXAMPLE 2** Ramón wants to find out how to adjust the travel time for flights traveling from west to east.

**QUESTION** How long is the first flight listed from Chicago to Norfolk/Virginia Beach?

### SOLUTION

To determine the effect of time change on the length of flight, it is necessary first to find out the time zones of the various cities. Use the time zone map to do this.

Chicago is in the Central Time Zone. Norfolk is in the Eastern Time Zone. The clocks in Norfolk are an hour later than those in Chicago. To make the arrival time correspond to Chicago time, subtract 1 hour from the length of the trip according to the schedule.

Using Chicago time, you can see that the trip lasts from 6:30 A.M. until 11:29 A.M. Subtracting 1 hour gives a trip of 4 hours and 59 minutes.

**EXAMPLE 3** Ramón now wants to work with travel time for flights traveling west from one time zone to another.

**QUESTION** How long is the flight that leaves Chicago at 3:10 P.M. and arrives in San Francisco at 7:10 P.M.?

### SOLUTION

The clocks in San Francisco are 2 hours earlier than those in Chicago. When it is 7:10 in San Francisco, it is 9:10 in Chicago. Therefore you must add 2 hours to the flight time based on the schedule. The total actual flight time is 6 hours.

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## SKILL 3

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**EXAMPLE 4** Several times, Ramón has driven to college to save money and also to bring things, such as his stereo system, that were too bulky to take on the plane. Now he has a chance to drive someone's car from New Orleans to Chicago at the start of the summer vacation. He wonders how much it would save. He can get a special rate flight for \$300. Each day that he arrives later will keep him from a summer job at which he will earn \$65 a day. His friend's car gets 20 miles per gallon of gas. Ramón expects to pay \$1.25 per gallon for gas. He plans to drive for 2 days. Overnight lodging will cost \$40 and he is budgeting \$25 per day for food.

**QUESTION** How much will he save by driving?

### SOLUTION

From the mileage chart in Lesson 11-1, Ramón finds the distance from New Orleans to Chicago is 912 miles. Driving 912 miles will take  $912 \div 20 = 45.6$  miles per gallon.

$$\text{Cost of gas: } 1.25(45.6) = \$57$$

$$\text{Lodging for one night: } \$40$$

$$\text{Meals for two days: } 2(25) = \$50$$

$$\text{Total cost of driving: } 57 + 40 + 50 = \$147$$

Since the cost of flying is \$300, it seems that Ramón will save  $300 - 147 = \$153$  by driving. However, he will lose two days pay which is  $2(65) = \$130$ . His actual cost of driving is  $147 + 130 = \$277$ . So he will save only  $300 - 277 = \$23$ . Ramón decides saving \$23 is not worth a tiring trip by car.

## TRY YOUR SKILLS

Ramón plans to take a flight to visit a friend in Orlando, Florida. His friend can pick him up at about noon. Ramón's ticket costs \$625. Use the Windward Airlines Schedule in the Reference Section.

1. At what time does the most convenient flight leave Chicago?
2. From what airport does it leave?
3. Is it a direct flight?
4. How long is the flight?
5. Does it seem likely that Ramón could save money by driving? Why or why not?

## EXERCISE YOUR SKILLS

Ramón's sister is planning a trip from Chicago to Williamsburg, Virginia. She wants to arrive between 2:00 and 4:00 in the afternoon. Use the Windward Airlines Schedule in the Reference Section.

1. Which departure times could she take?
2. From which airport does the earlier flight leave?
3. From which airport does the later flight leave?



### KEY TERMS

advance purchase  
connection  
direct flight  
nonrefundable  
non-stop flight  
time zone

4. How long is each flight?
5. Why might she choose the first flight?
6. Why might she choose the second flight?
7. If you want to compare the cost of air travel with car travel, what are some of the costs that must be included in each?
8. Why do you think airlines often charge people less if they pay for a particular flight weeks or months in advance?
9. What is one disadvantage of buying an airline ticket months in advance?

Use the Windward Airlines Schedule in the Reference Section to do the following.

10. Find the shortest flight from Chicago to San Francisco.
11. Find the earliest flight from Chicago to San Diego that goes through Dallas/Ft. Worth.
12. Find the latest flight from Chicago to Portland, Oregon.
13. Find the shortest flight from Chicago to Ontario, California.
14. Estimate the average flight time from Chicago to Phoenix.
15. Estimate the average flight time from Chicago to San Diego.
16. What is the air mileage for a trip from Chicago to Palm Springs, California?

Name the time zone in which each city is located.

17. Nashville, Tennessee
18. Newark, New Jersey
19. El Paso, Texas
20. Oakland, California
21. Denver, Colorado
22. Boston, Massachusetts

Ramón's friend Michael is planning a trip from Chicago to Portland, Oregon. Use the information in the Reference Section as needed. If he drives, he expects that it will take 4 days. He will have to spend \$70 a day for meals and lodging. His car gets 20 miles to the gallon of gas, and he expects to pay an average of \$1.30 per gallon. He can get an airline ticket for \$780.

23. What is the air mileage for the trip?
24. What is the driving mileage for the trip?
25. What will be the approximate cost of the trip by car?
26. Does he save by traveling by car or flying? How much?