Converting Units of Time (Hours, Minutes, Seconds)
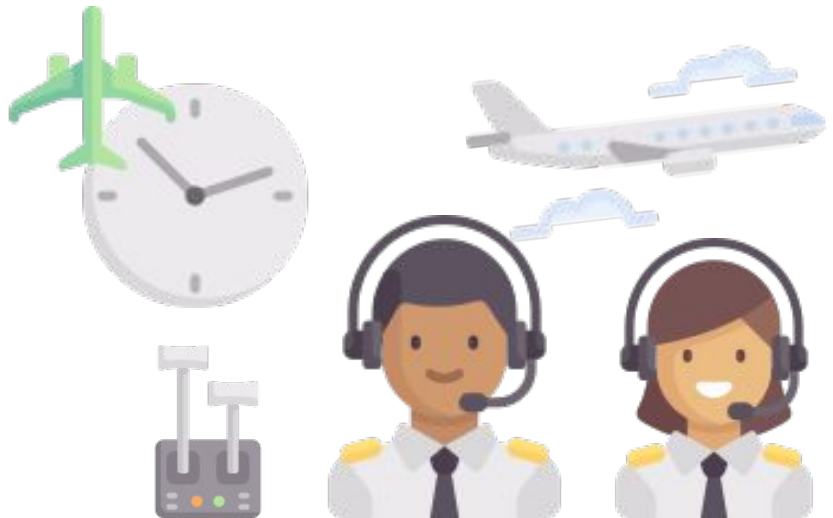
Suitable for students **aged 7-9**

This pack is suitable for learners aged 7-9 years old or 3rd to 4th grades (USA). The content covers fact files and relevant basic and advanced activities involving converting units of time in hours, minutes, and seconds.
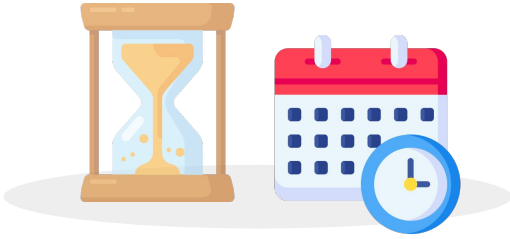
National Aviation Day is observed in the US on August 19 of each year. This day is for the celebration of the history and advancement of aviation. This is also the birthday of Orville Wright, who together with his brother Wilbur, contributed to powered flights that we are enjoying at present.

- Time is known as the ongoing series of events taking place.
- The basic unit of time is second. Time can also be expressed in minutes, hours, days, weeks, months, and years.
- Knowing the concept of time helps us schedule and determine our daily tasks such as flight schedule, estimating our time of departure and arrival, playing time, working time, etc.

Conversion Table for Time

Based on the Conversion Table for Time on the right,

- The smallest unit of time is seconds.
- The largest unit of time is a day.
- When converting a smaller unit to a larger unit, we use division.
- When converting a larger unit to a smaller unit, we use multiplication.

Conversion Table for Time		
60 seconds		
1 minute	=	60 seconds
1 hour	=	60 minutes
half-hour	=	30 minutes
A quarter	=	15 minutes
1 day	=	24 hours
1 day	=	1440 minutes
1 day	=	86400 seconds

Remember!

- In converting **minutes to seconds**, multiply the number of minutes by 60.

- In converting **hours to minutes**, multiply the number of hours by 60.

Conversion Table for Time

📌 **Remember!**

- In converting **seconds to minutes**, divide the number of seconds by 60.

- In converting **minutes to hours**, divide the number of minutes by 60.

Illustrative examples:

1. Mr. Wright is a pilot in the profession. His flight from New York to Seattle, WA, will be 2 hours from now. How many minutes are there in 2 hours?

- **2 hours = _____ minutes**

  To convert hours to minutes, multiply the number of hours by 60. Thus,

  2 x 60 minutes = 120 minutes

  2 hours = 120 minutes

  Mr. Wright's flight from NY to Seattle will be 120 minutes from now.
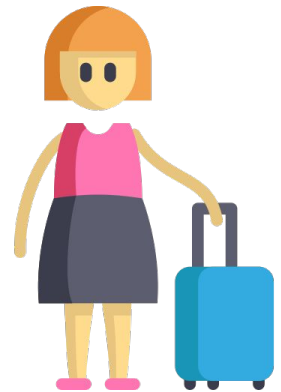
Conversion Table for Time

Illustrative examples:

2. Kelly will be travelling from Los Angeles to Las Vegas via plane. Her estimated flight time is 242 minutes. How many hours is that?

- **242 minutes = _____ hours**

  To convert minutes to hours, divide the number of minutes by 60. Thus,

  242 ÷ 60 minutes = **4.03 hours**

If we want to express a decimal number of hours, follow these steps:

For example: Convert 4.03 hours in terms of hour-minute format.

4 .03 hours

4. 03 hours is equal to
4 hours and 2 minutes
or
4 hrs and 2 mins.

Number of hours

.03 x 60 minutes = **1.8**
Round off 1.8 to the nearest whole number, the answer will be
2 minutes or 2 mins.

TABLE OF ACTIVITIES

Ages 7-8 (Basic)	3rd Grade
1	Passport Stamp
2	A Busy Airport
3	Ready for Take-Off
4	People in Aviation
5	Delayed Flights
Ages 8-9 (Advanced)	4th Grade
6	Flight Attendant Task
7	ETD and ETA
8	International Flights
9	Win a Free Aviation Experience
10	Aviation Problems

PASSPORT STAMP

Make sure to get a passport stamp as you determine if the following statements about time are TRUE or FALSE. Write T if it is correct, otherwise replace the underlined word to correct the statement.

1. Time can be expressed in <u>hours</u>, minutes, and seconds.	
2. The basic unit of time is <u>seconds</u>.	
3. There are <u>60 minutes</u> in an hour.	
4. 1 ½ hours is equal to <u>75 minutes</u>.	
5. A quarter before 5:00 pm means <u>4:45 pm</u>.	
6. <u>240 minutes</u> is equal to 8 hours.	
7. <u>30 minutes</u> is ½ hour.	
8. Half of a day is equal to <u>720 minutes.</u>	

FUN FACT

Aviation comes from the Latin word *"Avis",* meaning "bird". The aviation industry is the business sector dedicated to manufacturing and operating all types of aircraft.

A BUSY AIRPORT

The following are common scenarios in a busy airport. Encircle which measure of time is the most appropriate for each activity.

1. Scanning the baggages

   Seconds   Minutes   Hours

2. Checking in for your flight

   Seconds   Minutes   Hours

3. Walking from the entrance to the boarding gate

   Seconds   Minutes   Hours

4. Traveling from your house to the nearest airport

   Seconds   Minutes   Hours

5. Waiting for a cab to bring you to the airport

   Seconds   Minutes   Hours

6. Passing through the airport security gate

   Seconds   Minutes   Hours

7. Waiting for the plane to take-off

   Seconds   Minutes   Hours

8. Fastening your seatbelt

   Seconds   Minutes   Hours

9. Boarding in to the plane

   Seconds   Minutes   Hours

10. Travelling to your destination

    Seconds   Minutes   Hours

Let's get ready for take-off as you write the equivalent measurement of the following. You may write your solution in the space provided. Write the letter of your choice in the box.

A.   1 hour   E. 300 seconds   H. 2 hours
B.   3 hours   F. 1 minute   I. 2 days
C.   3 days   G. 1 day   J. 120 seconds
D.   240 seconds

1.)   60 minutes = _____

2.)   48 hours = _____

3.)   60 seconds = _____

4.)   2 minutes = _____

5.)   4 minutes = _____

6.)   24 hours = _____

7.)   72 hours = _____

8.)   120 minutes = _____

9.)   5 minutes = _____

10.)   180 minutes = _____

The people from the aviation industry would like to ask you some questions. Can you help them to answer it? Refer to their questions below.
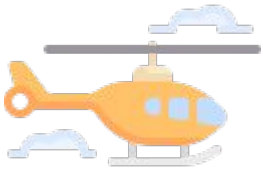
How many days are there in 48 hours?

How many minutes are there in 3 hours?

1

2

If there are 60 seconds in 1 minute, how many seconds are there in 5 minutes?

24 hours is equal to 1 day, So, how many hours are there in 3 days?

3

4

Airline flight delays and cancellations are caused by a wide range of factors, such as technical issues with aircraft, bad weather, air traffic control problems. The following are the list of the amount of time which some flights have been delayed. Convert them to their desired unit.

1) 5 days = _____ hrs

2) 7 days = _____ hrs

3) 4 days = _____ hrs

4) 5 hrs = _____ mins

5) 48 hrs _____ days

6) 72 hours = _____ days

FLIGHT ATTENDANT'S TASK

Help Millie, the flight attendant, to convert the following into smaller or larger units.

Seconds in 5 minutes

Seconds in 8 minutes

1.

Seconds in 2 minutes

3.

2.

Days in 144 hours ➡ 4.

Day in 168 hours ➡ 5.

Days in 72 hours ➡ 6.

Days in 120 hours ➡ 7.

ETD AND ETA

G4 Basic

ETD means estimated time of departure while ETA is the estimated time of arrival. Solve the problems below.

DESTINATION	ETD	ETA
New York to California	10: 50 AM	4:10 PM
Toronto to London	1:00 PM	8:37 PM
Japan to Singapore	9:15 AM	4:13 pm

1. How many minutes is the travel time from New York to California?

2. How long is the Toronto to London - flight in hours and minutes?

3. What is duration of Japan to Singapore - flight in minutes?

INTERNATIONAL FLIGHTS

HWM Airlines offer international flights to its clients. In each flight from LAX, draw a line towards its destination. The ETD and ETA are indicated in the table.
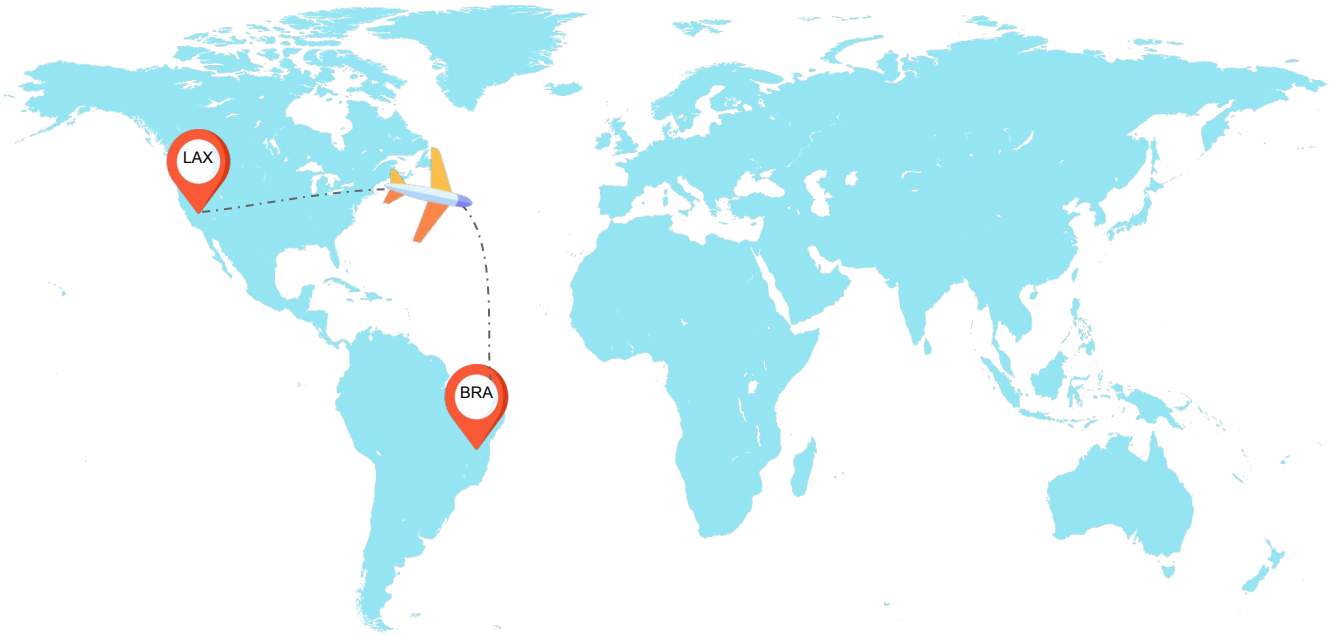
Destination	ETD	ETA	Flight Duration in hours (round off to the nearest tenths)
Ex. Brazil	12:00 nn	10:46 pm	10.8 hrs.
Seattle, WA	10:00 am	12:26 pm	
London, UK	1:00 am	11:15 am	
Oslo, Norway	2:30 am	3:55 pm	
Paris, France	5:00 am	3:40 pm	

Want to win a free aviation experience for two? Try to ace the 10-item conversion questions below and secure a raffle ticket for the grand prize! For answers in decimal form, round off your answer to the nearest tenth.

1) 25 mins = _____ secs

2) 11 mins and 45 secs = _____ secs

3) 21 mins = _____ secs

4) 450 secs = _____ mins

5) 715 secs = _____ mins

6) 27 secs = _____ mins

7) 2500 secs = _____ hours

8) 650 mins = _____ hours

9) 2 ½ days = _____ hours

10) 1 week = _____ hours

AVIATION PROBLEMS

Use your learning of converting units of time to answer these two word problems.

1. Annie has three flight schedules this week. The first flight duration is 4 hours and 11 mins; the second flight is 7 hours and 5 mins; and third flight is 8 hours and 45 mins. How long is the total time of the three flights in minutes?
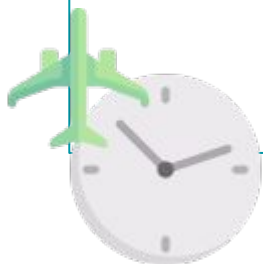
2. Heidi was able to win a free 10,000 minute flight. How many 4 ½ hour- flight can she make?

ANSWER GUIDE

Activity 1

1. TRUE	2. TRUE	3. TRUE	4. 90 minutes
5. TRUE	6. 480 minutes	7. TRUE	8. TRUE

Activity 2

1. Seconds	2. Minutes	3. Minutes
4. Hours	5. Minutes	6. Seconds
7. Minutes	8. Seconds	9. Minutes
10. Hours		

Activity 3

1) A	2) I	3) F	4) J	5) D	6) G	7) C
8) H	9) E	10) B				

Activity 4

1) 2 days	2) 180 minutes	3) 300 seconds	4) 72 hours

Activity 5

1) 120 hours	2) 168 hours	3) 96 hours	4) 300 minutes
5) 2 days	6) 3 days		

Activity 6

1) 300 seconds	2) 120 seconds	3) 480 seconds
4) 6 days	5) 7 days	6) 3 days	7) 5 days

ANSWER GUIDE

Activity 7

1. 6 hrs and 20 mins = 360 + 20 = 380 mins
2. 7 hrs and 37 minutes
3. 360 + 58 = 418 minutes

Activity 8

Seattle, WA - 2.4 hrs

London - 10.25 hrs

Oslo, Norway - 13.4 hrs

Paris, France - 10.7 hrs

Activity 9

1) 1500
2) 705
3) 1260
4) 7.5
5) 11.9
6) 0.5
7) 6.9
8) 1.8
9) 60
10) 168

Activity 10

1) 1st flight = 251 mins   2nd flight = 425 mins   3rd flight = 525 mins   Total = 1201 mins
2) approximately 37 flights

Thank you

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