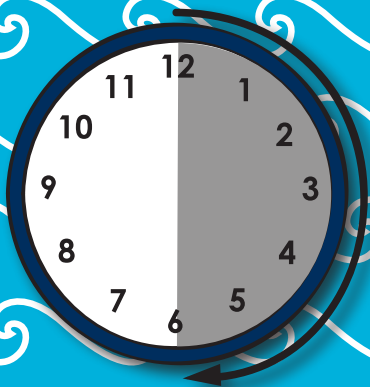


TIME FLIES

3RD
Grade



Jason left at 8:15 am.
He arrived at 8:30 am.

*How long does it take him
to walk to school?*



Marcus leaves at 3:15 pm.
It takes him 30 minutes to
get to practice.

What time does he arrive?



Sandra left for the movies
at 7:15 pm and arrived at
7:25 pm.

*How long did it take her to
get there?*



Sarah has to get her teeth cleaned.
The appointment took 45 minutes
from start to finish.

*If the appointment began at 9:27
am, what time did it end?*



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When Minutes Have Elapsed *
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Certificate of Completion
Answer Sheets

** Has an Answer Sheet*

Name: _____

Date: _____

Talking About Elapsed Time

Vocabulary

What is **elapsed time** anyway? "Elope" is a verb that means to slip or pass away. Elapsed time is time that has passed.

Here are some other important words to know:

- **Analog Clock:** A clock that has hands.
- **Digital Clock:** A clock that has a digital display.
- **Duration:** The time during which something happens.
- **Elapse:** To pass or go by.
- **Quarter Hour:** 15 minutes, or one quarter of an hour. In time, this is expressed as :15.
Example: *The quarter hour of 2:00 pm is 2:15 pm.*
- **Half Hour:** 30 minutes, or one half of an hour. In time, this is expressed as :30.
Example: *The half hour of 2:00 pm is 2:30 pm.*
- **Three Quarters of an Hour:** 45 minutes, or three-quarters of an hour is expressed as :45.
Example: *Three quarters of an hour for 2:00 pm is 2:45 pm.*
- **PM:** Post Meridian (after midday)
- **AM:** Ante Meridian (before midday)
- **12 noon:** 12:00 pm
- **12 midnight:** 12:00 am

Choose from the words above to fill in the blanks.

1. Matt's parents didn't have a digital clock so when he was very young. He learned to tell time on an old fashioned _____ clock with an hour and a minute hand.
2. At 8:00 _____ Sandy had to be at school in the morning. Sandy had to be ready for bed by 8:00 _____.
3. 5 hours had _____ from the time Marcus got on the airplane to the time he stepped off it in New York City.
4. There are two quarter hours in one _____.
5. Erica wanted to stay up past _____ on New Year's, but she always fell asleep at around 11:00 _____. Her older sister stayed up much later and usually fell asleep at 2:00 _____.

Why is the Day Divided into 24 Hours?

Many people say it was because of the ancient Egyptians that we now divide the day into 24 hours.

The Hand Theory

The Egyptians used a counting system in base 12. (Remember, our system is base 10.) Why did they use this system? Some historians think it was because Egyptians used the joints on their fingers to count, instead of their fingers, as we do.

Each of your four fingers has three joints. If you count by pointing to finger joints using your thumb you will count 12 joints.

You Try it!

Each of your four fingers has three joints. If you count by pointing to finger joints using your thumb you will count 12 joints.

Try it yourself: Count the joints on your hand using your thumb. Then, fill in the blanks underneath the each finger joint on the diagram below.



Why is the Day Divided into 24 Hours?

The Factor Theory

If you think about it, 12 is a very important number in measurement. We have 12 months on our calendar and 12 inches in a foot. Some people think that the reason we have divided the day into 24 hours (day and night each takes 12 hours) is because it's easier to divide up things that are in groups of 12.

Let's look:

**1. How many different numbers can you use to divide up 12?
Write as many as you can think of below:**

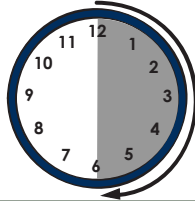
**2. How many different numbers can you use to divide up 10?
Write as many of these as you can think of below:**

Make 60

There are 60 minutes in an hour. Let's look at that number more closely so that we can see how it is divided up.

Factors of 60

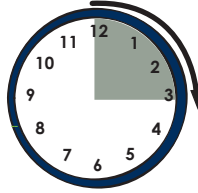
$$1. 2 \times \underline{\hspace{2cm}} = 60$$



30 minutes

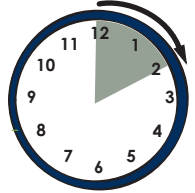
Now do the rest on your own:

$$2. 4 \times \underline{\hspace{2cm}} = 60$$



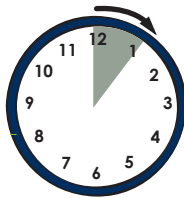
minutes

$$3. 6 \times \underline{\hspace{2cm}} = 60$$



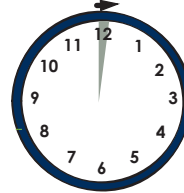
minutes

$$4. 12 \times \underline{\hspace{2cm}} = 60$$



minutes

$$2. 60 \times \underline{\hspace{2cm}} = 60$$

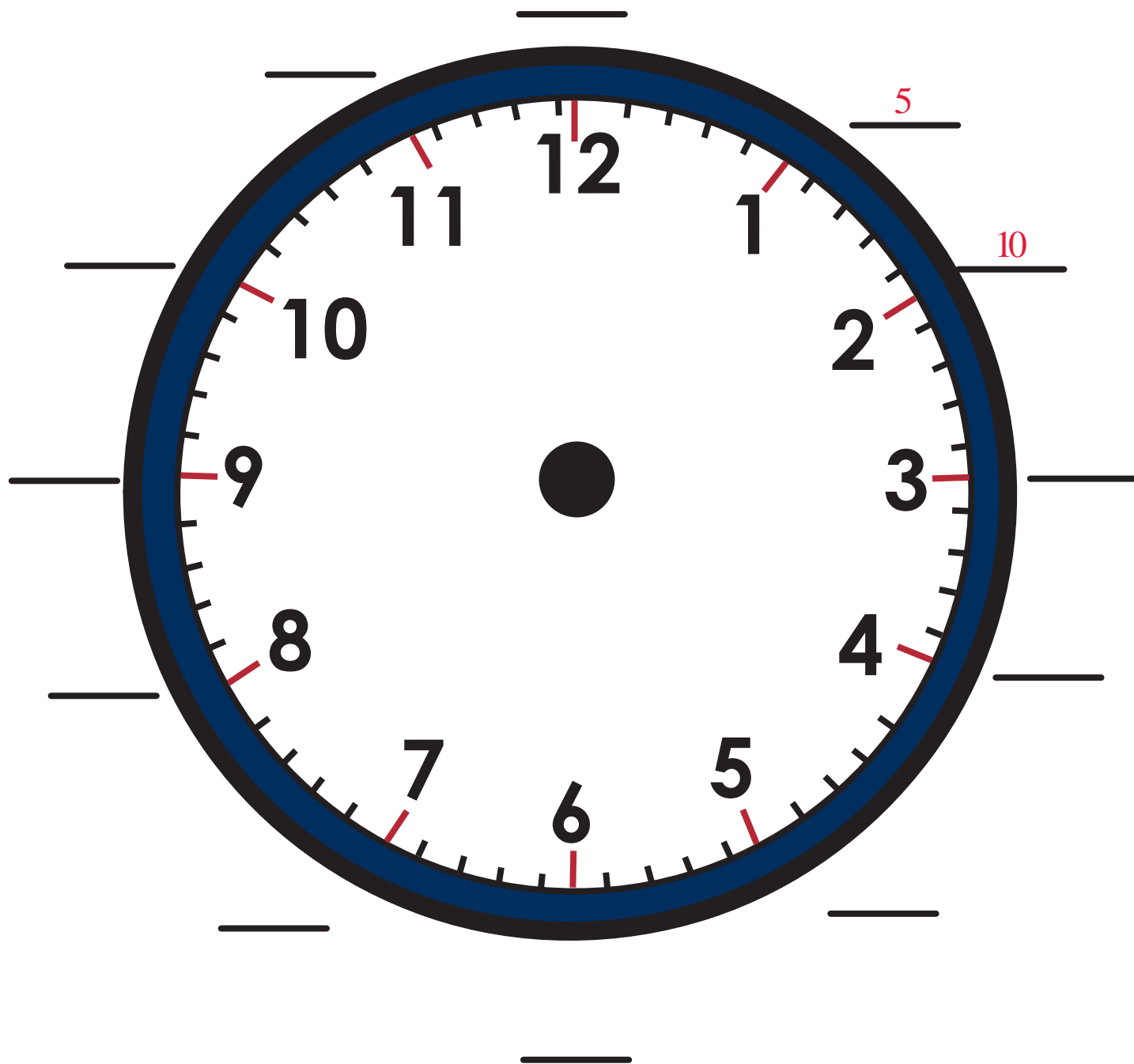


minutes

Counting by 5's

How Many Minutes in an Hour?

How many minutes are in an hour? How many minutes can you count on the clock? Count by fives around the clock to find out. The first two are done for you.

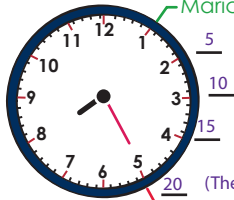


Counting by 5's

How Long Does It Take to Get to School?

Marcie, Jason, Danny, Carla, and Mark all walk to school every morning. They each have to leave at different times to get to school by 8:30 am. How long does it take each of them to walk to school? Use the clocks below to help you count by 5's to find out.

Example: Marcie leaves the house at 8:05 am. She arrives at 8:25 am.



How long does it take her to walk to school? 20 min.

1. Jason left at 8:15 am. He arrived at 8:30 am.

How long does it take him to walk to school? _____ min.



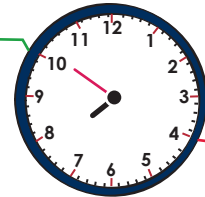
Jason leaves the house at 8:15.

He arrives at 8:30.

2. Danny left at 7:50 am. He arrived at 8:20 am.

How long does it take him to walk to school? _____ min.

Danny leaves the house at 7:50.



He arrives at 8:20.

3. Carla left at 8:10 am. She arrived at 8:20 am.

How long does it take her to walk to school? _____ min.

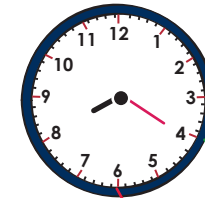


Carla leaves the house at 8:10.

She arrives at 8:20.

4. Mark left at 8:20 am. He arrived at 8:30 am.

How long does it take him to walk to school? _____ min.



Jason leaves the house at 8:20.

He arrives at 8:30.

Challenge Question: If all students walk the same speed, who lives the farthest away? Why do you think so?

Counting by 5's

Who Will Arrive On Time?

Carrie, Marcus, Ahmed, Theo, and Valerie have to get to soccer practice after school. Practice begins at 4:00 pm. The coach says that anyone who is late won't be able to play in Saturday's game. Use the clocks and the information below to calculate who will get to practice on time and be able to play.

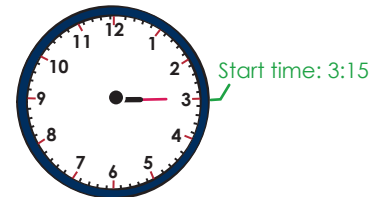
Example: Carrie leaves the house at 3:35 pm.
It takes her 20 minutes to get to practice.
What time does she arrive? 3:55 pm
Hour: Minutes



Hint: Count by 5's until you get to 20. See the example.

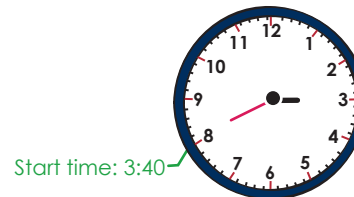
1. Marcus leaves at 3:15 pm.
It takes him 30 minutes to get to practice.

What time does he arrive? _____ : _____
Hours: Minutes



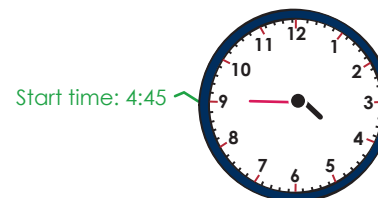
2. Ahmed leaves at 3:40 pm.
It takes him 10 minutes to get to practice.

What time does he arrive? _____ : _____
Hours: Minutes



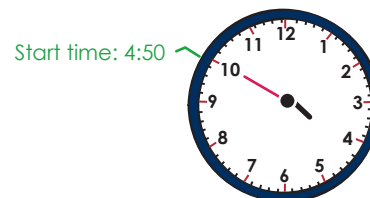
3. Theo leaves at 4:45 pm.
It takes him 20 minutes to get to practice.

What time does he arrive? _____ : _____
Hours: Minutes



4. Valerie leaves at 4:50 pm.
It takes her 5 minutes to get to practice.

What time does she arrive? _____ : _____
Hours: Minutes



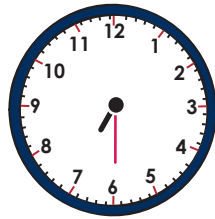
Challenge Question: Who was not able to play in Saturday's game? _____
How late were they? _____

Counting by 5's

Extra Practice

Use this practice sheet to become a time counting master!

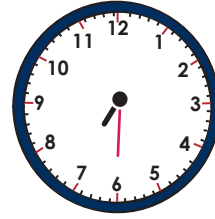
1.



Ed left for school at 7:30 am. It took him 10 minutes to get there. What time did he arrive?

_____ : _____ am

5.



Gabby arrived at school at 7:30 am. Her teacher doesn't get there until 8:00 am. How long does Gabby need to wait for her?

_____ minutes

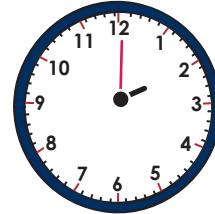
2.



Sandra left for the movies at 7:15 pm and arrived at 7:25 pm. How long did it take her to get there?

_____ minutes

6.



Lupita lives 15 minutes from Jackie's house. She leaves from her own house at 2:00 pm to go visit her. What time does she arrive?

_____ : _____ pm

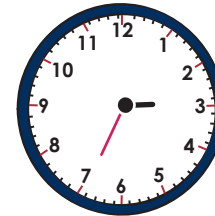
3.



Carlos is making cookies. They need to bake for 10 minutes. He puts them in the oven at 2:45 pm. What time should he take them out?

_____ : _____ pm

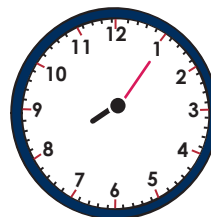
7.



Alan is making a pizza. He puts it in the oven at 3:35 pm. He needs to leave it in there for 20 minutes. What time should he take it out?

_____ : _____ pm

4.

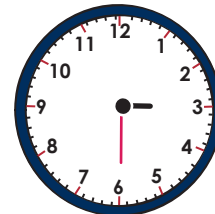


Norah got to the bus stop at 8:05 am. The bus arrives at 8:20 am. How long does she wait?

_____ minutes



8.



Bonus!

Sarah has a dentist appointment at 3:30 pm. She is supposed to arrive ten minutes before the appointment. What time should she arrive?

_____ : _____ pm

Hint: Think about counting in a different direction.

Counting by Hours and Half Hours

Mia's Day at School

Now you will be practicing how to count by hours and half hours.

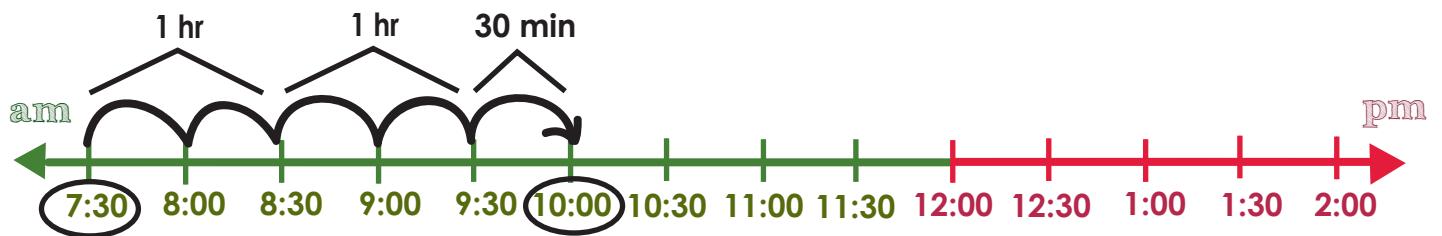
Here are some things to remember:

1 hour = 60 min

half hour = 30 min

Use the timelines below to help you count. The first problem is done for you.

Remember: Every two hops is one hour!



1. Mia loves playing tetherball with her friends during recess. Recess begins at 10:00 am. How long does Mia have to wait **from the time school starts** to the **time recess begins**?

ANSWER: Two hours and thirty minutes.



2. Mia's school day begins at 7:30 am. For the **first half hour**, there is music. For the **second half hour**, there is dance. Then, language arts begins. What time is it when language arts begins?

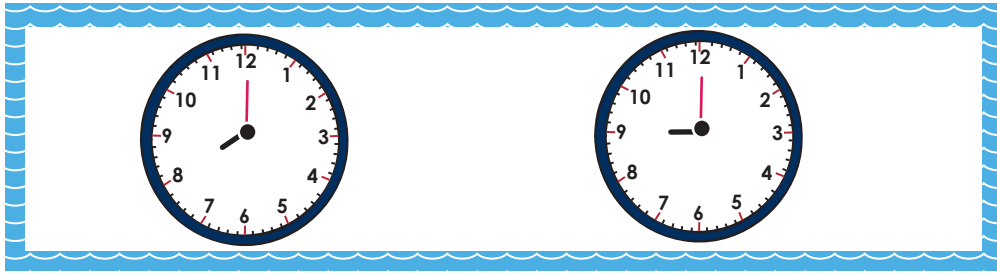
3. Mia goes to lunch at 11:30 am. Her math class starts **1 hour after** that. At what time does math class start?

4. Mia had a doctor's appointment in the morning and got to school **three hours late**. If **school starts at 7:30 am**, at what time did Mia get to school?

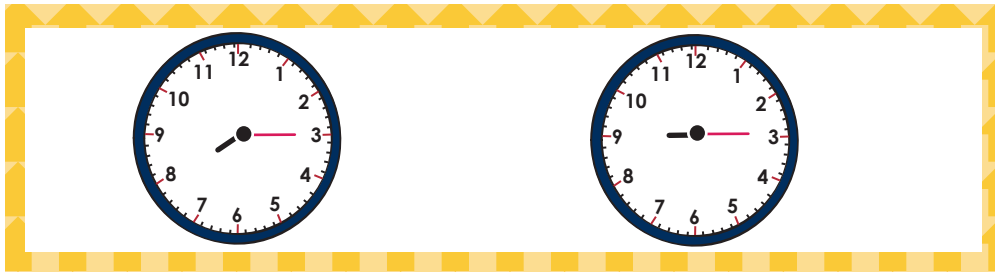
5. Mia's class has **half an hour** to get ready for the field trip. If they start getting ready at **8:00 am**, by what time should they be ready?

How Many Hours?

So far, you have counted hours like this: from 8:00 to 9:00.



There is exactly an hour's difference between 8:00 and 9:00. But how many hours are there between 8:15 and 9:15? Because the minutes past the hour are exactly the same for both, there is still one hour's difference between them.



Here are some problems that will help you practice. The first two are done for you.

1. A movie begins at 10:50 am and ends at 1:50 pm. How long is it?

HINT: If the minutes are the same amount, just count the hours. Remember to start over after 12 noon. There are 2 hours from 10 am to noon, and 1 hour from noon to 1. $1 + 2 = 3$.

Answer: 3 hours

2. Carrie goes to a movie that begins at 7:20 pm. The movie lasts exactly 2 hours. What time does it end?

Answer: 9:20 pm

3. Marcus needs to read an hour a night for school. If he begins reading at 6:36 pm, when should he stop? Give the exact time.

4. Sandra is flying on a plane from Alaska to California. The flight leaves late at night, at 11:44 pm. It arrives exactly at 1:44 am. How long is the flight?

5. Gabby has piano lessons at 4:30 pm for one hour. At what time will Gabby finish?

6. Diego's mom is making a pizza. She placed it in the oven at 11:45 am and must wait one hour before taking it out. At what time should Diego's mom take the pizza out?

7. Martha likes to take her dog out for a walk around the park. If she started at 2:30 pm and walked for one hour, at what time will she be done walking her dog?

Counting Hours and Quarter Hours

Jessie's Minimum Day at School

Now you will be practicing how to count by quarter hours and hours. Here are some important things to remember.

| | |
|---------------------------------|---|
| 1 hour = 60 min | |
| 1 quarter hour = 15 min | 2 quarter hours = 30 min = 1 half hour |
| 3 quarter hours = 45 min | 4 quarter hours = 60 min = 1 hour |

Directions: Use the table to help you answer the questions below about Jessie's day. The first one is done for you.

Jessie's Minimum Day at School

| Schedule | Quarter Hours | Half Hours | Hours |
|-------------|---------------|------------|-------|
| 8:00-8:15 | | | |
| 8:15-8:30 | | | |
| 8:30-8:45 | | | |
| 8:45-9:00 | | | |
| 9:00-9:15 | | | |
| 9:15-9:30 | | | |
| 9:30-9:45 | | | |
| 9:45-10:00 | | | |
| 10:00-10:15 | | | |
| 10:15-10:30 | | | |
| 10:30-10:45 | | | |
| 10:45-11:00 | | | |
| 11:00-11:15 | | | |
| 11:15-11:30 | | | |
| 11:30-11:45 | | | |
| 11:45-12:00 | | | |

- 1.** Jessie has band practice for the last 45 minutes of school on minimum days. What time does his band practice begin? (Hint: how many quarter hours must you count?)

11:15 am

- 2.** Language arts begins at 9:45 am and lasts until Jessie has to leave class for band practice. How long does language arts last?
-

- 3.** Jessie starts math at 8:15 am. He stays there for three quarter hours. At what time does math finish?
-

- 4.** Jessie's recess is 30 minutes long. If it starts at 9:00 am, what time does it finish?
-

When Minutes Have Elapsed and the Hour Stays the Same

There are many time problems where the hour stays the same. These problems can be solved by simply adding and subtracting the minutes.

EX: Meredith put a cake in the oven at exactly 8:12 pm. It needs to bake for 35 minutes. What time should she take it out?

To solve this problem just add the minutes: $12+35 = 47$

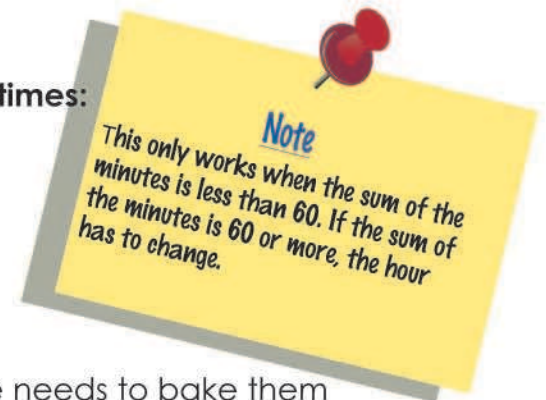
The answer? Meredith needs to take the cake out of the oven at 8:47 pm. The hour stays the same.

Addition: Do the problems below by adding to find end times:

1. Eva needs to boil some eggs for her lunch. They need to boil for 10 minutes exactly. The water started to boil at 2:43 pm. What time should Eva stop boiling the eggs?

2. Cindy put some cupcakes in the oven at 12:15 pm. She needs to bake them for 15 minutes. At what time should she take them out?

3. Bethany went to the grocery store with her mom. They got in line at the cash register at 5:25 pm and they waited in line for 20 minutes. At what time were they able to pay the cashier?



Subtraction Do the problems below by subtracting to find the starting or the elapsed time.

1. Ethan's dentist appointment was scheduled for 3:30 pm, but the dentist was running late. Ethan didn't see the dentist until 3:52 pm. How long did he wait?

2. Lily starts school at 7:30 am, but she likes to get there at 7:15 am instead. How many minutes early is she?

3. Stephanie lives 13 minutes away from her grandmother's house. If she needs to visit her grandmother at 4:30 pm at what time should she leave her house?

4. Erick takes 20 minutes to get ready for school. If he has to be ready by 7:30 am, at what time should he start getting ready?

When Minutes Have Elapsed and the Hour Changes

Look at this example:

EX: Meredith is baking a single batch of cookies. They need to bake for 12 minutes. She puts the cookies into the oven at 3:54 pm. When should she take them out?

If you try to do this problem by adding the minutes, you will end up with an answer like this:
 $54 + 12 = 66$.

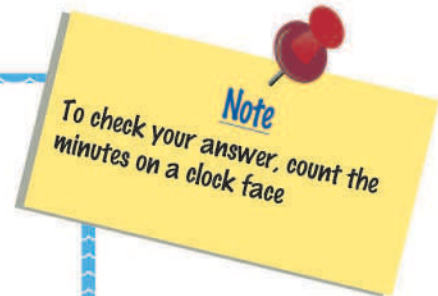
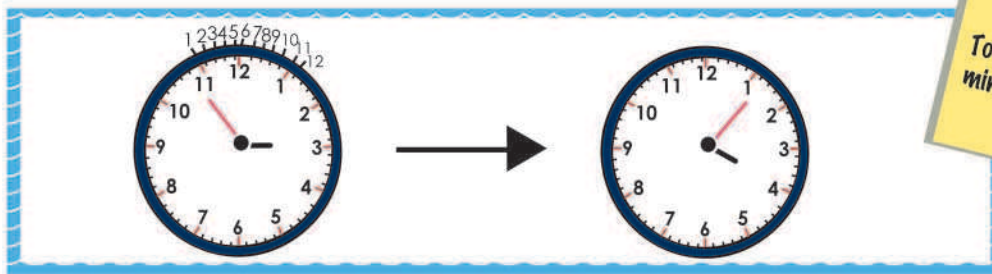
What's wrong with this answer?

There is no such time as 3:66. So what do you need to do? You need to regroup.

60 minutes = an hour. Add one hour to 3:00 to make it 4:00.

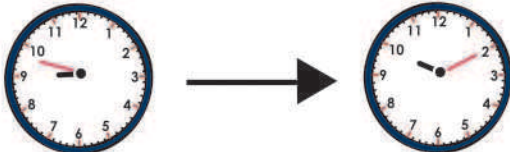
You have 6 minutes left over. Now add those to 4:00.

The answer is 4:06.

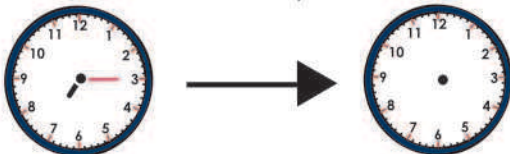


Do the following problems by either regrouping or counting using the clocks below:

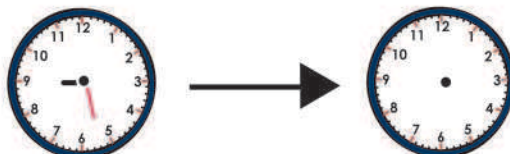
1. Jimmy is making muffins for his class party. He puts them in the oven at 9:48 am and removes them at 10:10 am. How long did they take to bake? **Answer:** _____



2. Ellie and Gabe wear a horse costume in the school play. It takes them 25 minutes to get ready. If they have to be onstage by 7:15 pm, what is the latest time they can begin getting ready in order to be ready on time? **Answer:** _____



3. Sarah has to get her teeth cleaned. The appointment took 45 minutes from start to finish. If the appointment began at 9:27 am, what time did it end? **Answer:** _____





Maria's First Airplane Journey

Use all of your counting time practice to answer questions about Maria's first trip on an airplane.

1. Maria is excited about her first journey in an airplane. Her plane leaves Seattle at 1:36 pm and arrives in San Diego at 3:39 pm. How long will her flight last?

Answer:

2. Check-in time is an hour and a half before the flight is scheduled to depart. What time is check-in?

Answer:

3. It takes 2 hours to drive to the airport. What is the latest time Maria and her family can leave the house if they want to arrive in time for check-in?

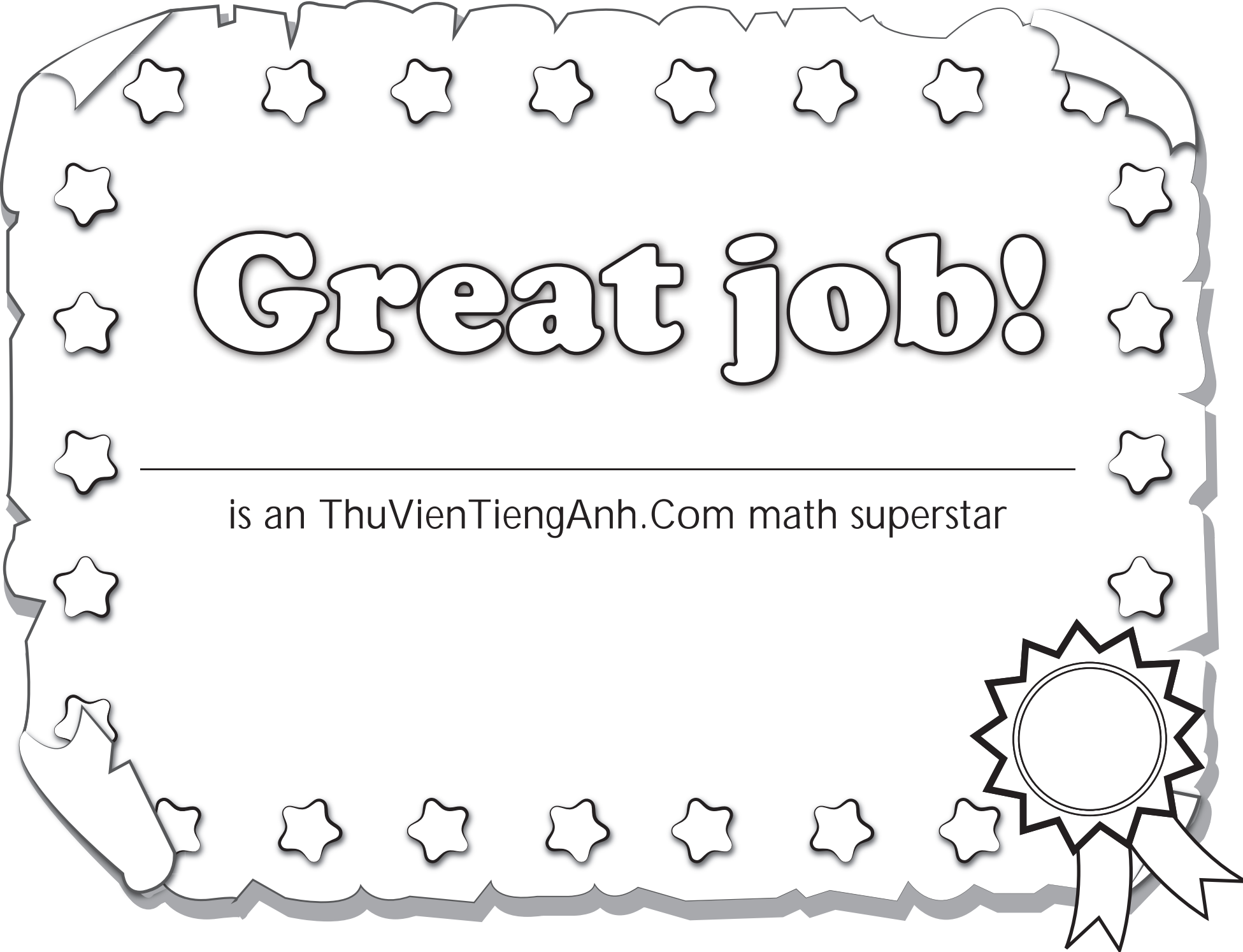
Answer:

4. Maria and her family have gone through security and are waiting to board the airplane. They hear an announcement that the flight will be delayed and won't depart until 2:10 pm. How much later is the flight leaving? (**HINT:** Use the original departure time from problem one to calculate your answer.)

Answer:

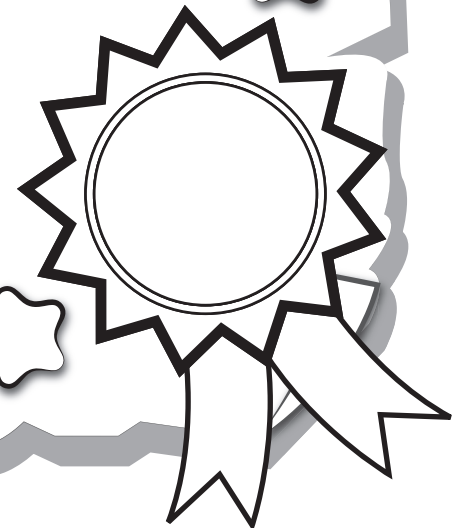
5. On the plane, the flight attendants announce that they will be serving beverages 10 minutes after the flight has taken off. The flight takes off at 2:10 pm. What time will the flight attendants begin serving beverages?

Answer:



Great job!

is an ThuVienTiengAnh.Com math superstar



Answer Sheets

Time Flies

Time Words

Factors of 12

Factors of 60

Minutes in an Hour

Counting by 5s Word Problems

Counting by 5s Word Problems 2

Counting by 5s Practice

Counting by Hours and Half Hours

How Many Hours?

Counting by Quarter Hours

When Minutes Have Elapsed

When Minutes Have Elapsed 2

Airplane Journey

Answer Sheet

Name: _____

Date: _____

Talking About Elapsed Time Vocabulary

What is **elapsed time** anyway? "Elapse" is a verb that means to slip or pass away. Elapsed time is time that has passed.

Here are some other important words to know:

- **Analog Clock:** A clock that has hands.
- **Digital Clock:** A clock that has a digital display.
- **Duration:** The time during which something happens.
- **Elapse:** To pass or go by.
- **Quarter Hour:** 15 minutes, or one quarter of an hour. In time, this is expressed as :15.
Example: *The quarter hour of 2:00 pm is 2:15 pm.*
- **Half Hour:** 30 minutes, or one half of an hour. In time, this is expressed as :30.
Example: *The half hour of 2:00 pm is 2:30 pm.*
- **Three Quarters of an Hour:** 45 minutes, or three-quarters of an hour is expressed as :45.
Example: *Three quarters of an hour for 2:00 pm is 2:45 pm.*
- **PM:** Post Meridian (after midday)
- **AM:** Ante Meridian (before midday)
- **12 noon:** 12:00 pm
- **12 midnight:** 12:00 am

Choose from the words above to fill in the blanks.

1. Matt's parents didn't have a digital clock so when he was very young. He learned to tell time on an old fashioned _____ **a n a l o g** _____ clock with an hour and a minute hand.
2. At 8:00 _____ **a m** _____ Sandy had to be at school in the morning. Sandy had to be ready for bed by 8:00 _____ **p m** _____.
3. 5 hours had _____ **e l a p s e d** _____ from the time Marcus got on the airplane to the time he stepped off it in New York City.
4. There are two quarter hours in one _____ **h a l f h o u r** _____.
5. Erica wanted to stay up past _____ **12 m i d n i g h t** _____ on New Year's, but she always fell asleep at around 11:00 _____ **p m** _____. Her older sister stayed up much later and usually fell asleep at 2:00 _____ **a m** _____.

Answer Sheet

Why is the Day Divided into 24 Hours?

The Factor Theory

If you think about it, 12 is a very important number in measurement. We have 12 months on our calendar and 12 inches in a foot. Some people think that the reason we have divided the day into 24 hours (day and night each takes 12 hours) is because it's easier to divide up things that are in groups of 12.

Let's look:

1. How many different numbers can you use to divide up 12?
Write as many as you can think of below:

$$12 \div 1 = 12, 12 \div 12 = 1, 12 \div 6 = 2, 12 \div 4 = 3, 12 \div 3 = 4, 12 \div 2 = 6$$

2. How many different numbers can you use to divide up 10?
Write as many of these as you can think of below:

$$10 \div 1 = 10, 10 \div 10 = 1, 10 \div 5 = 2, 10 \div 2 = 5$$

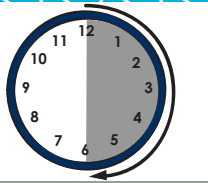
Answer Sheet

Make 60

There are 60 minutes in an hour. Let's look at that number more closely so that we can see how it is divided up.

Factors of 60

$$1. 2 \times \underline{\quad\quad} = 60$$



30 minutes

Now do the rest on your own:

$$2. 4 \times \underline{\quad\quad} = 60$$



15 minutes

$$3. 6 \times \underline{\quad\quad} = 60$$



10 minutes

$$4. 12 \times \underline{\quad\quad} = 60$$



5 minutes

$$2. 60 \times \underline{\quad\quad} = 60$$



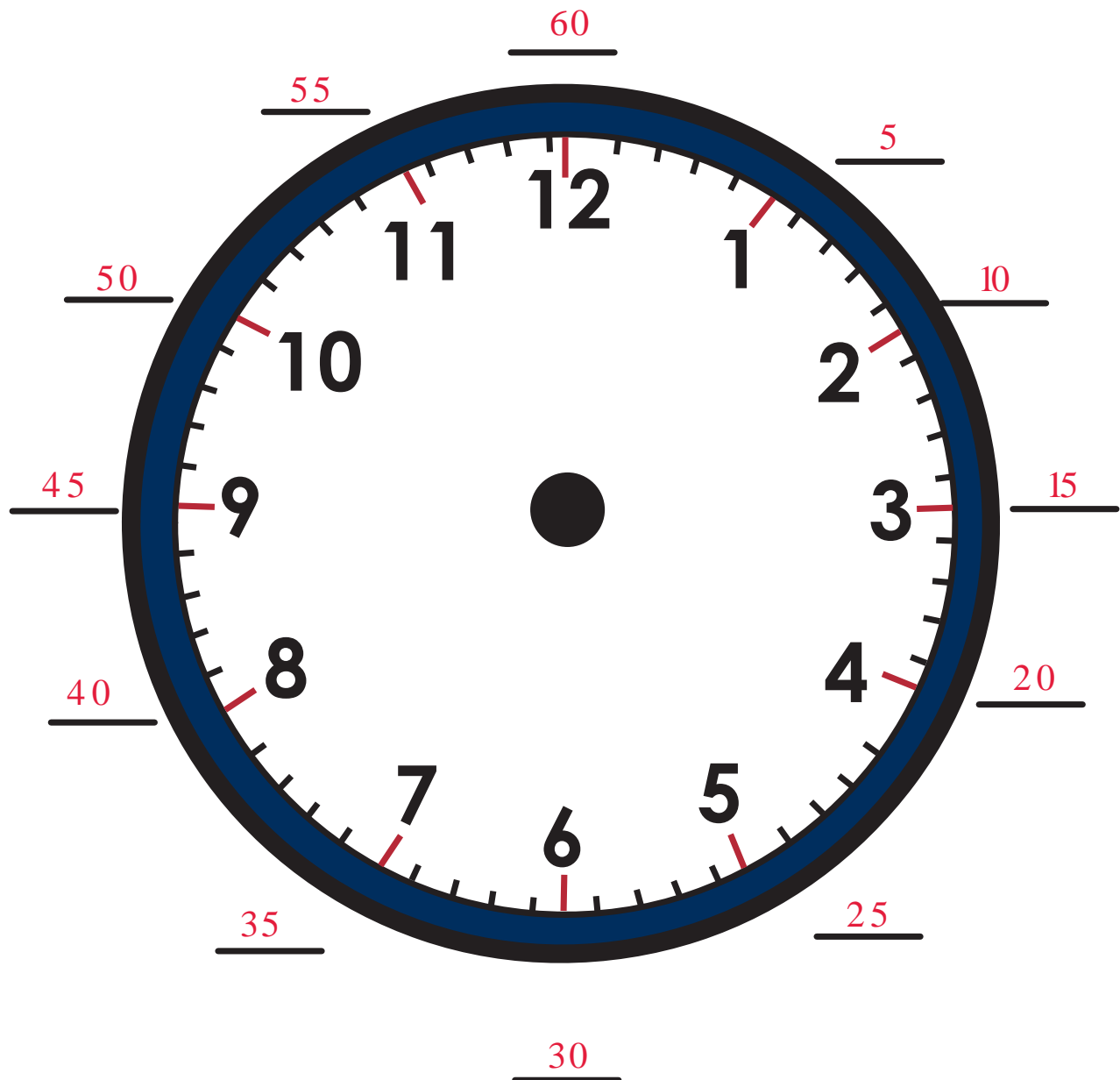
1 minutes

Answer Sheet

Counting by 5's

How Many Minutes in an Hour?

How many minutes are in an hour? How many minutes can you count on the clock? Count by fives around the clock to find out. The first two are done for you.



Answer Sheet

Counting by 5's

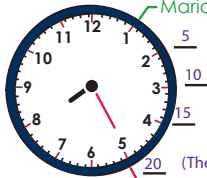
How Long Does It Take to Get to School?

Marcie, Jason, Danny, Carla, and Mark all walk to school every morning.

They each have to leave at different times to get to school by 8:30 am. How long does it take each of them to walk to school? Use the clocks below to help you count by 5's to find out.

Example: Marcie leaves the house at 8:05 am. She arrives at 8:25 am.

Marcie leaves the house at 8:05.



She arrives at 8:25.

(The time it took Marcie to walk to school.)

How long does it take her to walk to school? _____ min.

1. Jason left at 8:15 am. He arrived at 8:30 am.

How long does it take him to walk to school? 15 min.



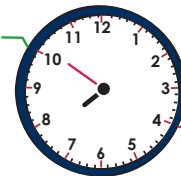
Jason leaves the house at 8:15.

He arrives at 8:30.

2. Danny left at 7:50 am. He arrived at 8:20 am.

How long does it take him to walk to school? 30 min.

Danny leaves the house at 7:50.



He arrives at 8:20.

3. Carla left at 8:10 am. She arrived at 8:20 am.

How long does it take her to walk to school? 10 min.



Carla leaves the house at 8:10.

She arrives at 8:20.

4. Mark left at 8:20 am. He arrived at 8:30 am.

How long does it take him to walk to school? 10 min.



Jason leaves the house at 8:20.

He arrives at 8:30.

Challenge Question: If all students walk the same speed, who lives the farthest away? Why do you think so?

ANSWER: Mark. It takes him the longest time to get to school.

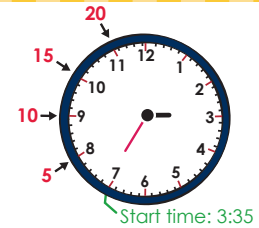
Answer Sheet

Counting by 5's

Who Will Arrive On Time?

Carrie, Marcus, Ahmed, Theo, and Valerie have to get to soccer practice after school. Practice begins at 4:00 pm. The coach says that anyone who is late won't be able to play in Saturday's game. Use the clocks and the information below to calculate who will get to practice on time and be able to play.

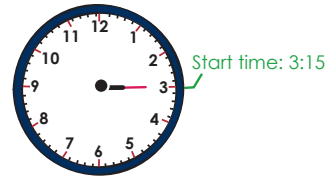
Example: Carrie leaves the house at 3:35 pm.
It takes her 20 minutes to get to practice.
What time does she arrive? 3:55 pm
Hour: Minutes



Hint: Count by 5's until you get to 20. See the example.

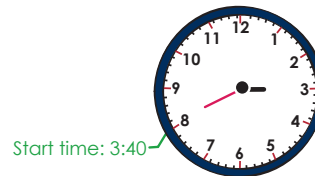
1. Marcus leaves at 3:15 pm.
It takes him 30 minutes to get to practice.

What time does he arrive? 3 : 45
Hours: Minutes



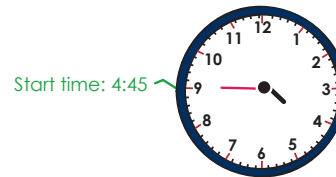
2. Ahmed leaves at 3:40 pm.
It takes him 10 minutes to get to practice.

What time does he arrive? 3 : 50
Hours: Minutes



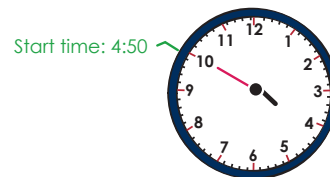
3. Theo leaves at 4:45 pm.
It takes him 20 minutes to get to practice.

What time does he arrive? 5 : 05
Hours: Minutes



4. Valerie leaves at 4:50 pm.
It takes her 5 minutes to get to practice.

What time does she arrive? 4 : 55
Hours: Minutes



Challenge Question: Who was not able to play in Saturday's game? Theo and Valerie

How late were they? 1 hour and 5 minutes late, 55 minutes late

Answer Sheet

Counting by 5's

Extra Practice

Use this practice sheet to become a time counting master!

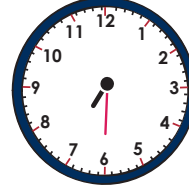
1.



Ed left for school at 7:30 am. It took him 10 minutes to get there. What time did he arrive?

7 : 40 am

5.



Gabby arrived at school at 7:30 am. Her teacher doesn't get there until 8:00 am. How long does Gabby need to wait for her?

30 minutes

2.



Sandra left for the movies at 7:15 pm and arrived at 7:25 pm. How long did it take her to get there?

10 minutes

6.



Lupita lives 15 minutes from Jackie's house. She leaves from her own house at 2:00 pm to go visit her. What time does she arrive?

2 : 15 pm

3.



Carlos is making cookies. They need to bake for 10 minutes. He puts them in the oven at 2:45 pm. What time should he take them out?

2 : 55 pm

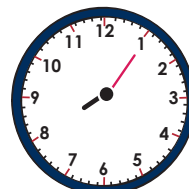
7.



Alan is making a pizza. He puts it in the oven at 3:35 pm. He needs to leave it in there for 20 minutes. What time should he take it out?

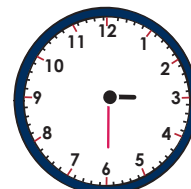
3 : 55 pm

4.



Norah got to the bus stop at 8:05 am. The bus arrives at 8:20 am. How long does she wait?

15 minutes



Bonus!

Sarah has a dentist appointment at 3:30 pm. She is supposed to arrive ten minutes before the appointment. What time should she arrive?

3 : 20 pm

Hint: Think about counting in a different direction.

Answer Sheet

Counting by Hours and Half Hours Mia's Day at School

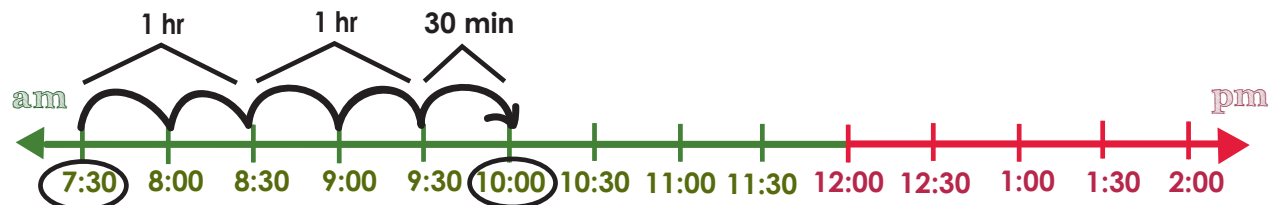
Now you will be practicing how to count by hours and half hours.
Here are some things to remember:

1 hour = 60 min

half hour = 30 min

Use the timelines below to help you count. The first problem is done for you.

Remember: Every two hops is one hour!



1. Mia loves playing tetherball with her friends during recess. Recess begins at 10:00 am. How long does Mia have to wait **from the time school starts** to the **time recess begins**?

ANSWER: Two hours and thirty minutes.



2. Mia's school day begins at 7:30 am. For the **first half hour**, there is music. For the **second half hour**, there is dance. Then, language arts begins. What time is it when language arts begins?

8:30 a m

3. Mia goes to lunch at 11:30 am. Her math class starts **1 hour after** that. At what time does math class start?

12:30 pm

4. Mia had a doctor's appointment in the morning and got to school **three hours late**. If **school starts at 7:30 am**, at what time did Mia get to school?

10:30 a m

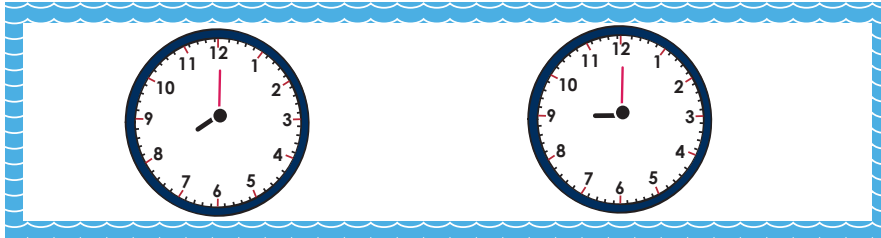
5. Mia's class has **half an hour** to get ready for the field trip. If they start getting ready at **8:00 am**, by what time should they be ready?

8:30 a m

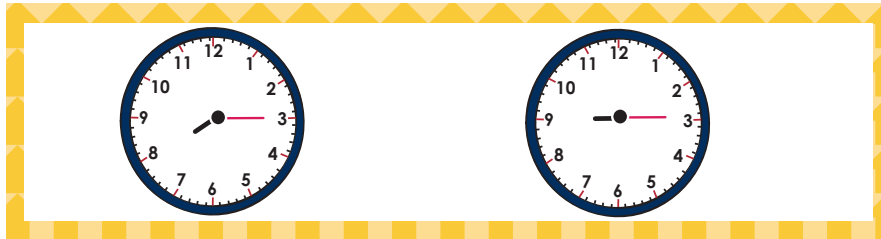
Answer Sheet

How Many Hours?

So far, you have counted hours like this: from 8:00 to 9:00.



There is exactly an hour's difference between 8:00 and 9:00. But how many hours are there between 8:15 and 9:15? Because the minutes past the hour are exactly the same for both, there is still one hour's difference between them.



Here are some problems that will help you practice. The first two are done for you.

1. A movie begins at 10:50 am and ends at 1:50 pm. How long is it?

HINT: If the minutes are the same amount, just count the hours. Remember to start over after 12 noon. There are 2 hours from 10 am to noon, and 1 hour from noon to 1. $1 + 2 = 3$.

Answer: 3 hours

2. Carrie goes to a movie that begins at 7:20 pm. The movie lasts exactly 2 hours. What time does it end?

Answer: 9:20 pm

-
3. Marcus needs to read an hour a night for school. If he begins reading at 6:36 pm, when should he stop? Give the exact time.

7:36 pm

4. Sandra is flying on a plane from Alaska to California. The flight leaves late at night, at 11:44 pm. It arrives exactly at 1:44 am. How long is the flight?

It's two hours long.

5. Gabby has piano lessons at 4:30 pm for one hour. At what time will Gabby finish?

5:30 pm

6. Diego's mom is making a pizza. She placed it in the oven at 11:45 am and must wait one hour before taking it out. At what time should Diego's mom take the pizza out?

12:45 pm

7. Martha likes to take her dog out for a walk around the park. If she started at 2:30 pm and walked for one hour, at what time will she be done walking her dog?

3:30 pm

Counting Hours and Quarter Hours

Jessie's Minimum Day at School

Now you will be practicing how to count by quarter hours and hours. Here are some important things to remember.

1 hour = 60 min

1 quarter hour = 15 min

2 quarter hours = 30 min = 1 half hour

3 quarter hours = 45 min

4 quarter hours = 60 min = 1 hour

Directions: Use the table to help you answer the questions below about Jessie's day. The first one is done for you.

Jessie's Minimum Day at School

| Schedule | Quarter Hours | Half Hours | Hours |
|-------------|---------------|------------|-------|
| 8:00-8:15 | | | |
| 8:15-8:30 | | | |
| 8:30-8:45 | | | |
| 8:45-9:00 | | | |
| 9:00-9:15 | | | |
| 9:15-9:30 | | | |
| 9:30-9:45 | | | |
| 9:45-10:00 | | | |
| 10:00-10:15 | | | |
| 10:15-10:30 | | | |
| 10:30-10:45 | | | |
| 10:45-11:00 | | | |
| 11:00-11:15 | | | |
| 11:15-11:30 | | | |
| 11:30-11:45 | | | |
| 11:45-12:00 | | | |

- Jessie has band practice for the last 45 minutes of school on minimum days. What time does his band practice begin? (Hint: how many quarter hours must you count?)
11:15 am
- Language arts begins at 9:45 am and lasts until Jessie has to leave class for band practice. How long does language arts last?
One and a half hours
- Jessie starts math at 8:15 am. He stays there for three quarter hours. At what time does math finish?
9:00 am
- Jessie's recess is 30 minutes long. If it starts at 9:00 am, what time does it finish?
9:30 am

Answer Sheet

Counting by Hours and Half Hours Mia's Day at School

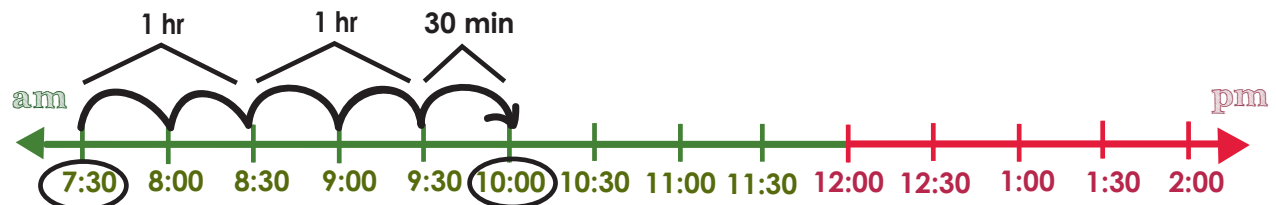
Now you will be practicing how to count by hours and half hours.
Here are some things to remember:

1 hour = 60 min

half hour = 30 min

Use the timelines below to help you count. The first problem is done for you.

Remember: Every two hops is one hour!



1. Mia loves playing tetherball with her friends during recess. Recess begins at 10:00 am. How long does Mia have to wait **from the time school starts** to the **time recess begins**?

ANSWER: Two hours and thirty minutes.



2. Mia's school day begins at 7:30 am. For the **first half hour**, there is music. For the **second half hour**, there is dance. Then, language arts begins. What time is it when language arts begins?

8:30 a m

3. Mia goes to lunch at 11:30 am. Her math class starts **1 hour after** that. At what time does math class start?

12:30 pm

4. Mia had a doctor's appointment in the morning and got to school **three hours late**. If **school starts at 7:30 am**, at what time did Mia get to school?

10:30 a m

5. Mia's class has **half an hour** to get ready for the field trip. If they start getting ready at **8:00 am**, by what time should they be ready?

8:30 a m

Answer Sheet

When Minutes Have Elapsed and the Hour Stays the Same

There are many time problems where the hour stays the same. These problems can be solved by simply adding and subtracting the minutes.

EX: Meredith put a cake in the oven at exactly 8:12 pm. It needs to bake for 35 minutes. What time should she take it out?

To solve this problem just add the minutes: $12+35 = 47$

The answer? Meredith needs to take the cake out of the oven at 8:47 pm. The hour stays the same.

Addition Do the problems below by adding to find end times:

1. Eva needs to boil some eggs for her lunch. They need to boil for 10 minutes exactly. The water started to boil at 2:43 pm. What time should Eva stop boiling the eggs?

2:53 pm

2. Cindy put some cupcakes in the oven at 12:15 pm. She needs to bake them for 15 minutes. At what time should she take them out?

12:30 pm

3. Bethany went to the grocery store with her mom. They got in line at the cash register at 5:25 pm and they waited in line for 20 minutes. At what time were they able to pay the cashier?

5:45 pm

Subtraction Do the problems below by subtracting to find the starting or the elapsed time.

1. Ethan's dentist appointment was scheduled for 3:30 pm, but the dentist was running late. Ethan didn't see the dentist until 3:52 pm. How long did he wait?

22 minutes

2. Lily starts school at 7:30 am, but she likes to get there at 7:15 am instead. How many minutes early is she?

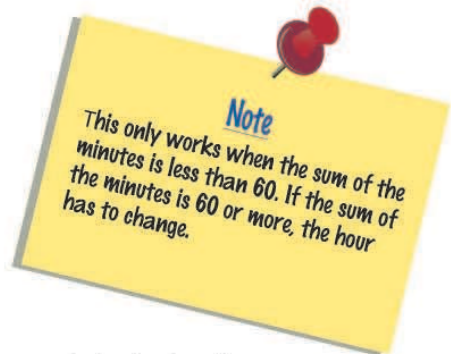
15 minutes

3. Stephanie lives 13 minutes away from her grandmother's house. If she needs to visit her grandmother at 4:30 pm at what time should she leave her house?

4:17 pm

4. Erick takes 20 minutes to get ready for school. If he has to be ready by 7:30 am, at what time should he start getting ready?

7:10 am



Answer Sheet

When Minutes Have Elapsed and the Hour Changes

Look at this example:

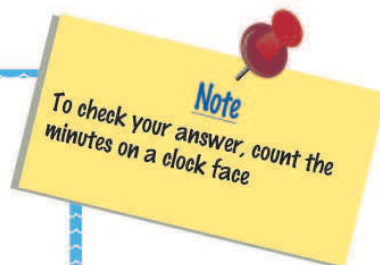
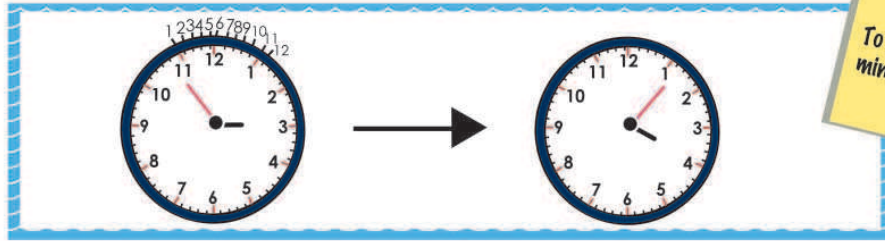
EX: Meredith is baking a single batch of cookies. They need to bake for 12 minutes. She puts the cookies into the oven at 3:54 pm. When should she take them out?

If you try to do this problem by adding the minutes, you will end up with an answer like this:
 $54 + 12 = 66$.

What's wrong with this answer?

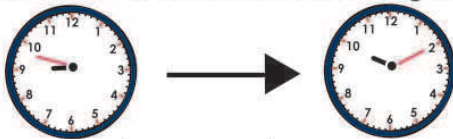
There is no such time as 3:66. So what do you need to do? You need to regroup.

60 minutes = an hour. Add one hour to 3:00 to make it 4:00.
You have 6 minutes left over. Now add those to 4:00.
The answer is 4:06.

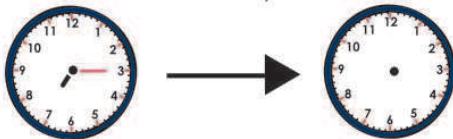


Do the following problems by either regrouping or counting using the clocks below:

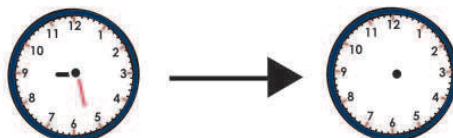
1. Jimmy is making muffins for his class party. He puts them in the oven at 9:48 am and removes them at 10:10 am. How long did they take to bake? **Answer: 22 minutes**



2. Ellie and Gabe wear a horse costume in the school play. It takes them 25 minutes to get ready. If they have to be onstage by 7:15 pm, what is the latest time they can begin getting ready in order to be ready on time? **Answer: 6:50 pm**



3. Sarah has to get her teeth cleaned. The appointment took 45 minutes from start to finish. If the appointment began at 9:27 am, what time did it end? **Answer: 10:12 am**



Answer Sheet



Maria's First Airplane Journey

Use all of your counting time practice to answer questions about Maria's first trip on an airplane.

1. Maria is excited about her first journey in an airplane. Her plane leaves Seattle at 1:36 pm and arrives in San Diego at 3:39 pm. How long will her flight last?

Answer:

2 hours and 2 minutes

2. Check-in time is an hour and a half before the flight is scheduled to depart. What time is check-in?

Answer:

12:06 pm

3. It takes 2 hours to drive to the airport. What is the latest time Maria and her family can leave the house if they want to arrive in time for check-in?

Answer:

10:06 am

4. Maria and her family have gone through security and are waiting to board the airplane. They hear an announcement that the flight will be delayed and won't depart until 2:10 pm. How much later is the flight leaving? (**HINT:** Use the original departure time from problem one to calculate your answer.)

Answer:

34 minutes

5. On the plane, the flight attendants announce that they will be serving beverages 10 minutes after the flight has taken off. The flight takes off at 2:10 pm. What time will the flight attendants begin serving beverages?

Answer:

2:20 pm