

Name _____

Tell and Write Time to the Minute

I Can tell and write time to the nearest minute.

Florida's B.E.S.T.

- Measurement 3.M.2.1
- Mathematical Thinking & Reasoning
MTR.1.1, MTR.2.1, MTR.3.1, MTR.4.1,
MTR.5.1, MTR.7.1



UNLOCK the Problem

Groundhog Day is February 2. People say that if a groundhog can see its shadow on that morning, winter will last another 6 weeks. The clock shows the time when the groundhog saw its shadow. What time was it?

Example

Look at the time on this clock face.

- What does the hour hand tell you?

- What does the minute hand tell you?

In 1 minute, the minute hand moves from one mark to the next on a clock. It takes 5 minutes for the minute hand to move from one number to the next on a clock. There are 60 minutes in 1 hour.

You can count on by fives to tell time to five minutes. Count zero at the 12.

0, 5, 10, 15, _____, _____, _____, _____

So, the groundhog saw its shadow at _____.

- Underline the question.
- Where will you look to find the time?

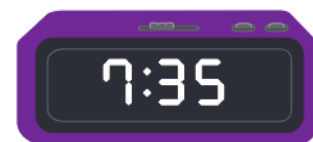


A digital clock shows the time as you would write it.

Write: 7:35

Read:

- seven _____
- thirty-five minutes after _____

**Math Talk**

MTR 4.1 Engage in discussions on mathematical thinking.

How does skip counting by fives help you tell the time when the minute hand points to a number?

- Is 7:35 a reasonable answer? Explain. _____

Time to the Minute

Count by fives and ones to help you.

One Way Find minutes after the hour.

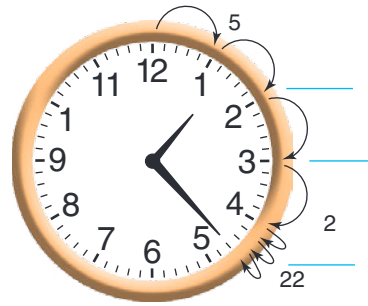
Look at the time on this clock face.

- What does the hour hand tell you?

- What does the minute hand tell you?

Count on by fives and ones from the 12 on the clock to where the minute hand is pointing. Write the missing counting numbers next to the clock.

When a clock shows 30 or fewer minutes after the hour, you can read the time as a number of minutes *after* the hour.



Write: _____

Read:

- twenty-three minutes after _____
- one _____



Another Way Find minutes before the hour.

Look at the time on this clock face.

- What does the hour hand tell you?

- What does the minute hand tell you?

Now count by fives and ones from the 12 on the clock back to where the minute hand is pointing. Write the missing counting numbers next to the clock.

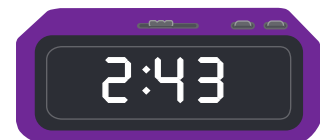
When a clock shows 31 or more minutes after the hour, you can read the time as a number of minutes *before* the next hour.



Write: 2:43

Read:

- seventeen _____ before three
- two _____



Common Error

Remember that time *after* the hour uses the previous hour, and time *before* the hour uses the next hour.

Share and Show

Math Board

1. How would you use counting and the minute hand to find the time shown on this clock? Write the time.



Write the time. Write one way you can read the time.

2.



3.



4.



Math Talk

MTR 5.1 Use patterns and structure.

How do you know when to stop counting by fives and start counting by ones when counting minutes after an hour?

On Your Own

Write the time. Write one way you can read the time.

5.



6.



7.



MTR Write the time another way.

8. 34 minutes after 5

9. 11 minutes before 6

10. 22 minutes after 11

11. 5 minutes before 12

Problem Solving • Applications

Use the clocks for 12 and 13.

12. How many minutes later in the day did the groundhog in Pennsylvania see its shadow than the groundhog in New York?
-

13. What if the groundhog in Pennsylvania saw its shadow 5 minutes later? What time would this be?
-

14. If you look at your watch and the hour hand is between the 8 and the 9 and the minute hand is on the 11, what time is it?
-

15. What time is it when the hour hand and the minute hand are both pointing to the same number? Aiden says it is 6:30. Camilla says it is 12:00. Who is correct? Explain.
-
-

16.  Lucy said the time is 4:46 on her digital watch. Explain where the hands on an analog clock are pointing when it is 4:46.
-
-

17. Write the time that is shown on the clock. Then write the time another way.
-



Time of Day the Groundhog
Saw Its Shadow



NY



PA



Name _____

a.m. and p.m.**I Can** tell when to use a.m. and p.m. with time.**Florida's B.E.S.T.**

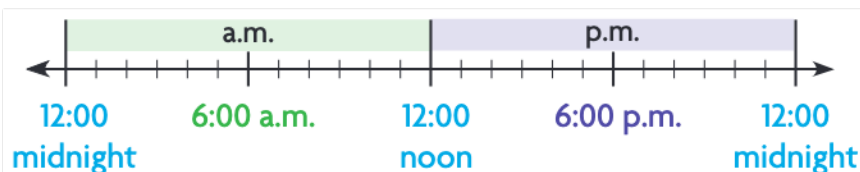
- Measurement 3.M.2.1
- Mathematical Thinking & Reasoning
MTR.1.1, MTR.4.1, MTR.5.1, MTR.6.1, MTR.7.1

**UNLOCK the Problem**

Lorena's family is going hiking tomorrow at 7:00. How should Lorena write the time to show that they are going in the morning, not in the evening?

You can use a number line to show the sequence or order of events. It can help you understand the number of hours in a day.

Think: The distance from one mark to the next mark represents one hour.



Tell time after midnight.

Midnight is 12:00 at night.

The times after midnight and before noon are written with a.m.

7:00 in the morning is written as

7:00 _____

So, Lorena should write the hiking time as 7:00 _____

- Circle the helpful information that tells about the hiking time.
- What do you need to find?



After Midnight and Before Noon

a.m.



- Find the mark that shows 7:00 a.m. on the number line above. Circle the mark.

Math Talk

MTR 4.1 Engage in discussions on mathematical thinking.

How are the number line on this page and the clock face alike? How are they different?

Tell time after noon.

Callie's family is going for a canoe ride at 3:00 in the afternoon. How should Callie write the time?

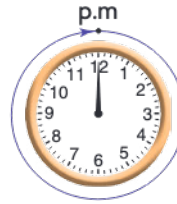
Noon is 12:00 in the daytime.

The times after noon and before midnight are written with p.m.

3:00 in the afternoon is written as 3:00 _____

So, Callie should write the time as 3:00 _____

After Noon and Before Midnight



Share and Show



1. Name two things you do in the a.m. hours.
Name two things you do in the p.m. hours.

Remember

quarter after is 15 minutes after
quarter to is 15 minutes before
half past is 30 minutes after

Write the most likely time for the activity using the clock. Use a.m. or p.m.

2. ride a bicycle



3. make a sandwich



4. get ready for bed



5. This morning Bogart woke up at the time shown on this clock. Write the time using a.m. or p.m. _____



**Math
Talk**

TR Use patterns and
5.1 structure.

How do you decide whether to use a.m. or p.m. when you write the time?

On Your Own**Write the most likely time for the activity using the clock. Use a.m. or p.m.**

6. eat breakfast



7. have science class



8. play softball



Write the time. Use a.m. or p.m.

9. quarter after 9:00 in the morning

10. 6 minutes after 7:00 in the evening

11. Eberhard is taking a trip on an airplane. His flight leaves at 24 minutes before 9 in the morning. Using a.m. or p.m., at what time does Mark's flight leave?

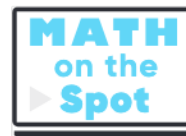
12. Jennie's class ate lunch at 18 minutes before noon each day. Using a.m. or p.m., write the time that Jennie's class ate lunch.

13. Daylight saving time begins on the second Sunday in March at 2:00 in the morning. Write the time.

Use a.m. or p.m. _____

14. Galiana and her dad are using their new telescope to look at the stars. They start looking at the stars at 23 minutes after 9 and stop looking at the stars at 10 minutes after 10. Using a.m. or p.m., at what time do they start and stop looking at the stars?

15. From midnight to noon each day, how many times does the minute hand on a clock pass 6? Explain how you found your answer.




Problem Solving · Applications

16. Lea and her father arrived at the scenic overlook 15 minutes before noon and left 12 minutes after noon. Using a.m. or p.m., write the time when Lea and her father arrived at the scenic overlook and the time when they left.

a. What do you need to find? _____

b. What do you need to find first? _____

c.  Show the steps you used to solve the problem.

d. They arrived at _____ .m.

They left at _____ .m.

17. The Kahele family spent the day at the lake.
Write the letter for each activity next to the time they did it.

- (A) Went swimming soon after lunch.
- (B) Ate breakfast at home.
- (C) Watched the sunset over the lake.
- (D) Got to the lake cabin in the morning.
- (E) Had sandwiches for lunch.

<input type="checkbox"/>	9:50 a.m.
<input type="checkbox"/>	7:00 p.m.
<input type="checkbox"/>	12:15 p.m.
<input type="checkbox"/>	1:30 p.m.
<input type="checkbox"/>	7:00 a.m.



Name _____

Measure Time Intervals

I Can measure elapsed time in minutes.

Florida's B.E.S.T.

- Measurement 3.M.2.1, 3.M.2.2
- Mathematical Thinking & Reasoning
MTR.1.1, MTR.2.1, MTR.3.1, MTR.4.1,
MTR.6.1, MTR.7.1



UNLOCK the Problem

Alicia and her family visited the Kennedy Space Center. They watched a movie that began at 4:10 p.m. and ended at 4:53 p.m. How long did the movie last?

- Circle the times the movie began and ended.
- Underline the question.

To find **elapsed time**, find the amount of time that passes from the start of an activity to the end of the activity.

One way Use a number line.

STEP 1 Find the time on the number line that the movie began.

STEP 2 Count on to the ending time, 4:53. Count on by tens for each 10 minutes. Count on by ones for each minute. Write the times below the number line.

STEP 3 Draw the jumps on the number line to show the minutes from 4:10 to 4:53. Record the minutes. Then add them.



$$10 + 10 + 10 + 10 + 1 + 1 + 1 = \underline{\hspace{2cm}}$$

The elapsed time from 4:10 p.m. to

4:53 p.m. is minutes.

So, the movie lasted minutes.

Math Talk

MTR 4.1 Engage in discussions on mathematical thinking.

What is another way you can use jumps on the number line to find the elapsed time from 4:10 p.m. to 4:53 p.m?



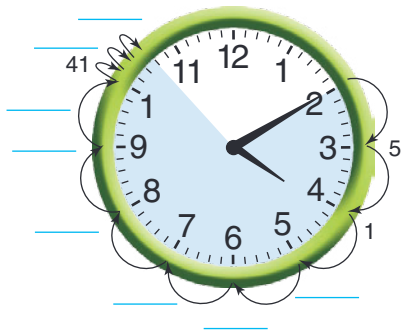
Other Ways

Start time: 4:10 p.m. End time: 4:53 p.m.

A Use an analog clock.

STEP 1 Find the starting time on the clock.

STEP 2 Count the minutes by counting on by fives and ones to 4:53 p.m. Write the missing counting numbers next to the clock.



So, the elapsed time is _____ minutes.

B Use subtraction.

STEP 1 Write the ending time. Then write the starting time so that the hours and minutes line up.

STEP 2 The hours are the same, so subtract the minutes.

$$\begin{array}{r}
 4 : \quad \square \quad \leftarrow \text{end time} \\
 - 4 : \quad \square \quad \leftarrow \text{start time} \\
 \hline
 \quad \square \quad \leftarrow \text{elapsed time}
 \end{array}$$

Find the elapsed time in minutes two ways.

Start time: 10:05 a.m. End time: 10:30 a.m.

A Use a number line.

STEP 1 Find 10:05 on the number line. Count on from 10:05 to 10:30. Draw marks and record the times on the number line. Then draw and label the jumps.

Think: Count on using longer amounts of time that make sense.



STEP 2 Add to find the total minutes from 10:05 to 10:30.

From 10:05 a.m. to _____ is _____ minutes.

So, the elapsed time is _____ minutes.

B Use subtraction.

Think: The hours are the same, so subtract the minutes.

$$\begin{array}{r}
 10:30 \\
 - 10:05 \\
 \hline
 \quad \square
 \end{array}$$

Math Talk

TR 4.1 Engage in discussions on mathematical thinking.

Which method do you prefer to use to find elapsed time? Why?

Share and Show



1. Use the number line to find the elapsed time
from 1:15 p.m. to 1:40 p.m. _____



Find the elapsed time.

- ✓ 2. Start: 11:35 a.m. End: 11:54 a.m.



- ✓ 3. Start: 4:20 p.m. End: 5:00 p.m.





MTR 4.1 Engage in discussions on mathematical thinking.

How would you use a number line to find the elapsed time from 11:10 a.m. until noon?

On Your Own

MTR Find the elapsed time.

4. Start: 8:35 p.m. End: 8:55 p.m.



6. Start: 9:25 a.m. End: 9:43 a.m.



5. Start: 10:10 a.m. End: 10:41 a.m.



7. Start: 2:15 p.m. End: 2:52 p.m.



Problem Solving • Applications

8. Juan started reading his book about outer space at quarter after nine in the morning. He read until quarter to ten in the morning. How long did Juan read his book?

9. **MTR** Tim and Alicia arrived at the rocket display at 3:40 p.m. Alicia left the display at 3:56 p.m. Tim left at 3:49 p.m. If the answer is Alicia, what is the question?



10. At the space center, Katina bought a model of a shuttle. She started working on the model the next day at 11:13 a.m. She worked until leaving for lunch at 11:51 a.m. After lunch, she worked on the model again from 1:29 p.m. until 1:48 p.m. How long did Katina work on the model?

11. Aiden arrived at the rocket display at 3:35 p.m. and left at 3:49 p.m. Ava arrived at the rocket display at 3:30 p.m. and left at 3:56 p.m. Ava spent how many more minutes at the rocket display than Aiden?

12. Kira got on the tour bus at 5:15 p.m. She got off the bus at 5:37 p.m. How long was Kira on the bus?

Select the number to make the sentence true.

Kira was on the bus for _____ minutes.

15

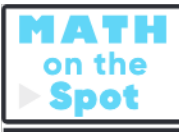
22

37

52

Show the Math

Demonstrate Your Thinking



Name _____

Find Start and End Times

I Can find a starting time or an ending time when I know the elapsed time.



UNLOCK the Problem Real World

Javier begins working on his oceans project at 1:30 p.m. He spends 42 minutes painting a model of Earth and labeling the oceans. At what time does Javier finish working on his project?

One Way Use a number line to find the ending time.

STEP 1 Find the time on the number line when Javier started working on the project.

STEP 2 Count forward on the number line to add the elapsed time. Draw and label the jumps to show the minutes.

Think: I can break apart 42 minutes into shorter amounts of time.

STEP 3 Write the times below the number line.



The jumps end at _____

So, Javier finishes working on his project at _____

Another Way Use a clock to find the ending time.

STEP 1 Find the starting time on the clock.

STEP 2 Count on by fives and ones for the elapsed time of 42 minutes. Write the missing counting numbers next to the clock.

So, the ending time is _____

Florida's B.E.S.T.

- Measurement 3.M.2.1, 3.M.2.2
- Mathematical Thinking & Reasoning MTR.1.1, MTR.2.1, MTR.3.1

Math Talk

MTR 4.1 Engage in discussions on mathematical thinking.

When finding times on the number line, how do you know what size jumps to make?



Find Starting Times

Whitney went swimming in the ocean for 25 minutes. She finished swimming at 11:15 a.m. At what time did Whitney start swimming?

One Way Use a number line to find the starting time.

STEP 1 Find the time on the number line when Whitney finished swimming in the ocean.

STEP 2 Count back on the number line to subtract the elapsed time. Draw and label the jumps to show the minutes.

STEP 3 Write the times below the number line.



You jumped back to _____.

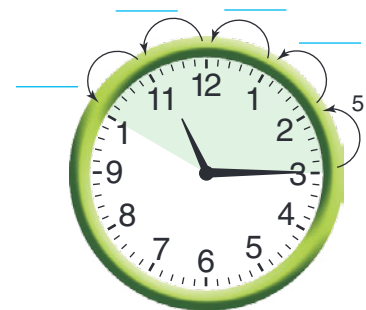
So, Whitney started swimming at _____.

Another Way Use a clock to find the starting time.

STEP 1 Find the ending time on the clock.

STEP 2 Count back by fives for the elapsed time of 25 minutes. Write the missing counting numbers next to the clock.

So, the starting time is _____.



Share and Show



1. Use the number line to find the starting time if the elapsed time is 35 minutes. _____



Math Talk

TR 4.1 Engage in discussions on mathematical thinking.

How do you find the starting time when you know the ending time and the elapsed time?

Find the ending time.

- ✓ 2. Starting time: 1:40 p.m.
Elapsed time: 33 minutes



- ✓ 3. Starting time: 9:55 a.m.
Elapsed time: 27 minutes



On Your Own

Find the starting time.

4. Ending time: 3:05 p.m.
Elapsed time: 40 minutes



5. Ending time: 8:06 a.m.
Elapsed time: 16 minutes



Problem Solving · Applications



6. Suzi began fishing at 10:30 a.m. and fished until 11:10 a.m. James finished fishing at 11:45 a.m. He fished for the same length of time as Suzi. At what time did James start fishing? Explain.



7. Jessica starts cleaning her room at 5:50 p.m. and finishes at 6:44 p.m. Her sister Norah finishes cleaning her room at 7:12 p.m. She cleans for the same amount of time as Jessica. At what time does Norah start cleaning?

8. Dante's surfing lesson began at 2:35 p.m. His lesson lasted 45 minutes.

Draw hands on the clock to show the time Dante's surfing lesson ended.



Connect to Science

Tides

If you have ever been to the beach, you have seen the water rise and fall along the shore every day. This change in water level is called the tide. Ocean tides are mostly caused by the moon and the sun's gravity. High tide is when the water is at its highest level. Low tide is when the water is at its lowest level. In most places on Earth, high tide and low tide each occur about twice a day.

Use the table for 9 and 10.

9. The first morning, Courtney walked on the beach for 20 minutes. She finished her walk 30 minutes before high tide. At what time did Courtney start her walk?

10. **TR** The third afternoon, Courtney started collecting shells at low tide. She collected shells for 35 minutes. At what time did Courtney finish collecting shells?



**Tide Times
Atlantic City, NJ**

	Low Tide	High Tide
Day 1	2:12 a.m.	9:00 a.m.
	2:54 p.m.	9:00 p.m.
Day 2	3:06 a.m.	9:36 a.m.
	3:36 p.m.	9:54 p.m.
Day 3	4:00 a.m.	10:12 a.m.
	4:30 p.m.	10:36 p.m.

Name _____

Solve Time Interval Problems

I Can solve problems about time.

Florida's B.E.S.T.

- Measurement 3.M.2.1, 3.M.2.2
- Mathematical Thinking & Reasoning
MTR.1.1, MTR.2.1, MTR.3.1, MTR.4.1,
MTR.6.1, MTR.7.1



UNLOCK the Problem



Zach and his family are going to New York City. Their airplane leaves at 9:15 a.m. They need to arrive at the airport 60 minutes before their flight. It takes 15 minutes to get to the airport. The family needs 30 minutes to get ready to leave. At what time should Zach's family start getting ready?



Read the Problem

What do I need to find?

I need to find
what _____

Zach's family
should start
_____.

What information do I need to use?

the time the _____ leaves;
the time the family needs to arrive
at the _____; the time it takes
to get to the _____; and the time the
family needs to _____

How will I use the information?

I will use a number
line to find the answer.

Solve the Problem

- Find 9:15 a.m. on the number line.
Draw the jumps to show the time.
- Count back _____ minutes to find
the time they need to arrive at the
airport.
- Count back _____ minutes to find the time they need to get to the airport.
- Count back _____ minutes to find the time they
need to get ready to leave.

So, Zach's family
should start getting ready at _____ .m.



**Math
Talk**

MTR 6.1 Assess the reasonableness of solutions.

How can you check your answer by starting with the time the family starts getting ready?

Try Another Problem

Bradley gets out of school at 2:45 p.m. It takes him 10 minutes to walk home. Then he spends 10 minutes eating a snack. He spends 8 minutes putting on his soccer uniform. It takes 20 minutes for Bradley's father to drive him to soccer practice. At what time does Bradley arrive at soccer practice?



Read the Problem

What do I need to find?

What information do I need to use?

How will I use the information?

Solve the Problem

Draw a diagram to help you explain your answer.



1. At what time does Bradley arrive at soccer practice? _____

2. How do you know your answer is reasonable?

Math Talk

TR 4.1

Engage in discussions on mathematical thinking.

Do you need to draw jumps on the number line in the same order as the times in the problem?

Share and Show

1. Patty went to the shopping mall at 1:30 p.m. She shopped for 25 minutes. She spent 40 minutes eating lunch. Then she met a friend at a movie. At what time did Patty meet her friend?

First, begin with _____ on the number line.

Then, count forward _____ and _____.

Think: I can break apart the times into shorter amounts of time that make sense.



1:30 p.m.

So, Patty met her friend at _____ m.

2. What if Patty goes to the mall at 1:30 p.m. and meets a friend at a movie at 3:15 p.m.? Patty wants to shop and have 45 minutes for lunch before meeting her friend. How much time can Patty spend shopping?

3. Avery got on the bus at 1:10 p.m. The trip took 90 minutes. Then she walked for 32 minutes to get home. At what time did Avery arrive at home?

On Your Own

4. Kyle starts listening to music at 4:50 p.m. He listens for 35 minutes, eats dinner for 20 minutes, and then listens for 45 more minutes. What time is it when he finishes listening to music after dinner?

Unlock the Problem

- ✓ Circle the question.
- ✓ Underline important facts.
- ✓ Choose a strategy you know.

5. Jamal spent 60 minutes using the computer. He spent a half hour of the time playing games and the rest of the time researching his report. How many minutes did Jamal spend researching his report?
-



6. When Caleb got home from school, he worked on his science project for 20 minutes. Then he studied for a test for 30 minutes. He finished at 4:35 p.m. At what time did Caleb get home from school?
-

7. Miguel started playing video games at 7:25 p.m. He played until 8:55 p.m. How long did he play?
-

8. When Laura arrived at the library, she spent 40 minutes reading a book. Then she spent 15 minutes reading a magazine. She left the library at 4:15 p.m.

Circle the time that makes the sentence true.

Laura arrived at the library at

3:20 p.m.

3:35 p.m.

5:10 p.m.