

# LESSON 5

## Objective

Use elapsed time to find times before.

## Common Core State Standards

- **3.MD.1** Tell and write time to the nearest minute and measure time intervals in minutes. Solve word problems involving addition and subtraction of time intervals in minutes, e.g., by representing the problem on a number line diagram.

## Measurement and Data

# Finding Times Before

In the previous lesson, students worked with elapsed time to find times after, given a start time. A variation on this activity is to work with elapsed time to find times before, given an end time. To find times before, students need to count backward, or subtract, from a given time.

**Try It!** Perform the Try It! activity on the next page.

## Talk About It

Discuss the Try It! activity.

- **Ask:** *How did you know that you had to count backward? Discuss the term ago and how it refers to something that has already happened.*
- **Say:** *Remember that if you count backward and go past the 12, the hour hand needs to go back to the previous hour. You can check your answer by beginning at your found starting time, and counting forward to see if you end at the given time in the problem.*

## Solve It

With students, reread the problem. Have them draw a clock and show the elapsed time. Then have students write a sentence telling how they know when the game actually started.

## More Ideas

For other ways to teach about using elapsed time to find times before—

- Have pairs use Time Interval Rods and Write-On/Wipe-Off Student Clocks. Have one student set a time on his/her clock and pick a rod from a bag. Then have the other student count backward that many minutes from the given time and set the start time on his/her clock. Switch roles and repeat.
- Have pairs use Time Interval Rods and Time Work Mats. Have one student pick an end time on the work mat and pick rods from a bag. Then have the other student show the earlier time on the work mat with the rods. Have both students find the elapsed time. Switch roles and repeat.

## Formative Assessment

Have students try the following problem.

*Luis made brownies. The brownies had to cook for 45 minutes. He took them out of the oven at 1:05. What time did he put them in the oven?*

- A. 12:20   B. 12:45   C. 1:45   D. 1:50

## Try It! 20 minutes | Groups of 4

Here is a problem about using elapsed time to find times before.

At 5:35, Nora saw her brother watching a soccer game she also wanted to watch. "I thought the game started at 5:30," Nora said. Her brother explained, "So did I, but it actually started 35 minutes ago." What time did the game start?

Introduce the problem. Then have students do the activity to solve the problem. Distribute Time Interval Rods, Write-On/Wipe-Off Clocks, Time Work Mats, and markers to students.

### Materials

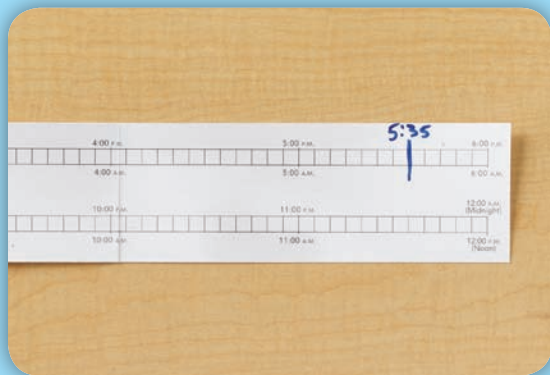
- Time Interval Rods (1 set per group)
- Time Work Mats (1 per student)
- Write-On/Wipe-Off Student Clock (1 per student)
- dry erase markers (1 set per group)



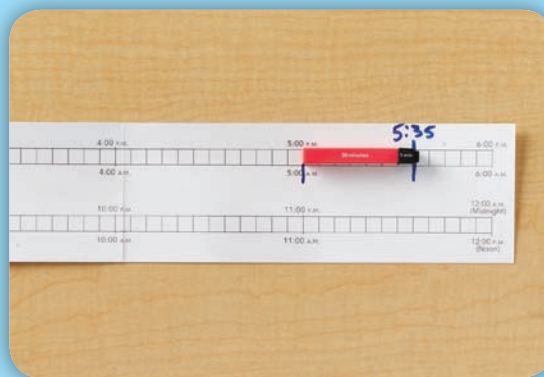
**1. Ask:** What time did Nora arrive to watch the game? **Say:** Move the hands on your clock to show the time Nora joined her brother to watch the game.



**2. Say:** Nora's brother said the game started 35 minutes ago. **Ask:** What do we need to do to find the start time? Help students understand that they need to count backward by 5-minute intervals until they reach 35 minutes. **Ask:** What time is it when you count back 35 minutes? What time did the game actually start?



**3. Say:** We also can use the Time Interval Rods and Time Work Mats to find the start time. Have students find and mark 5:35 on their work mats.



**4.** Have students use Time Interval Rods to fill time backward 35 minutes. **Ask:** What time did the game start? Does that time match the time you found using your clocks?



**Use a Write-On/Wipe-Off Clock to model the elapsed time.**

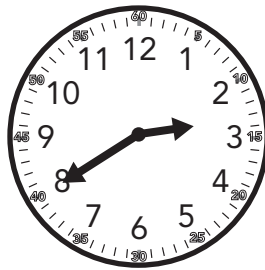
**Write the start time.**

(Check students' work.)

- Jared practiced his drum for 40 minutes. He finished practicing at 3:20. What time did he start practicing?



End

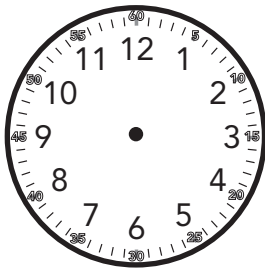


Start

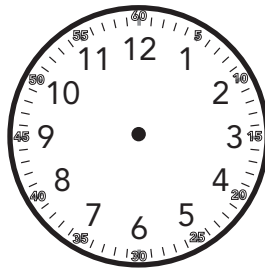
Start time: 2:40

**Using a Write-On/Wipe-Off Clock, model the elapsed time. Draw the hands on the clock. Write the start time.**

- It took Gene 25 minutes to mow the lawn. He finished at 5:30. What time did he start mowing the lawn?



End



Start

Start time: \_\_\_\_\_

first clock should show 5:30, second clock should show 5:05, start time: 5:05

**Find the start time.**

- Ashley has gymnastics for 40 minutes. Her class is over at 6:45. What time does her gymnastics class start?
- Sonia's softball practice was over at 4:10. Her practice lasted 50 minutes. What time did her practice start?

Start time: 6:05

Start time: 3:20

## Answer Key

**Challenge!** The soccer game ended at 6:30. There were two 20-minute halves and a 5-minute halftime. Use a clock or number line to find what time the second half started, when halftime started, and when the game started. Then write the times.

Challenge: Second half started at 6:10, halftime started at 6:05, and the game started at 5:45.

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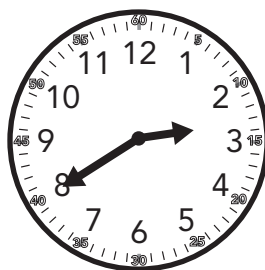
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**Use a Write-On/Wipe-Off Clock to model the elapsed time.  
Write the start time.**

1. Jared practiced his drum for 40 minutes. He finished practicing at 3:20. What time did he start practicing?



End

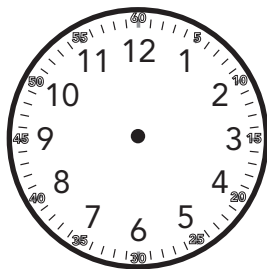


Start

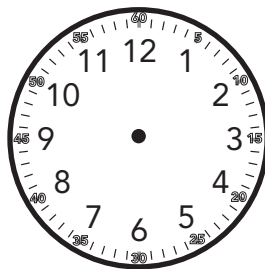
Start time: \_\_\_\_\_

**Using a Write-On/Wipe-Off Clock, model the elapsed time. Draw the hands on the clock. Write the start time.**

2. It took Gene 25 minutes to mow the lawn. He finished at 5:30. What time did he start mowing the lawn?



End



Start

Start time: \_\_\_\_\_

**Find the start time.**

3. Ashley has gymnastics for 40 minutes. Her class is over at 6:45. What time does her gymnastics class start?
4. Sonia's softball practice was over at 4:10. Her practice lasted 50 minutes. What time did her practice start?

Start time: \_\_\_\_\_

Start time: \_\_\_\_\_

Name \_\_\_\_\_

**Challenge!** The soccer game ended at 6:30. There were two 20-minute halves and a 5-minute halftime. Use a clock or number line to find what time the second half started, when halftime started, and when the game started. Then write the times.

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