

LESSON 3

Objective

Add intervals of time.

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

Add Intervals of Time

In the early grades, students acquire a variety of experiences with measurement. These experiences are focused in large part on measuring the lengths of objects. Their first experiences with time are in learning how to tell time, which they might not interpret as a kind of measurement. But when students learn to work with intervals of time in third grade, they will appreciate the similarities to measuring lengths of objects.

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

Talk About It

Discuss the Try It! activity.

- **Say:** *We can use a number line to show time intervals.*
- **Ask:** *What time would we have as the starting time on the number line? Draw a number line on the board, starting at 7:00, and have students draw a similar number line on a piece of paper. Say: Now draw marks to show 5-minute intervals up to 8:00. Ask: How much time did each of Toby's activities take? Say: Let's mark them on the number line to show how long they take.*

Solve It

With students, reread the problem. Using the number line on the board, have students count out the elapsed times for each of Toby's morning activities and find out what time Toby would be ready for school. **Ask:** *What time will Toby be ready for school?* Have students write two sentences explaining how they determined the amount of time Toby needed to get ready for school and what time he was ready to leave.

More Ideas

For other ways to teach about adding intervals of time—

- Have students work in pairs to create time stories. Have one student select a starting time. Have the other student pick Time Interval Rods to represent the times passing in the story. Then have the pairs work together to create their stories, using Write-On/Wipe-Off Student Clocks to show the start times, time intervals, and end times.
- Have pairs work with Time Interval Rods. Starting at 12:00, have them take turns pulling a Time Interval Rod from a bag and placing it on the Time Work Mat to add time. Have them write each time interval, the sum of the intervals, and the end time.

Formative Assessment

Have students try the following problem.

It is 6:15. If 15 minutes pass, then 10 minutes more, what time will it be?

- A. 5:15 B. 6:25 C. 5:25 D. 6:40

Try It! 20 minutes | Groups of 4

Here is a problem about adding intervals of time.

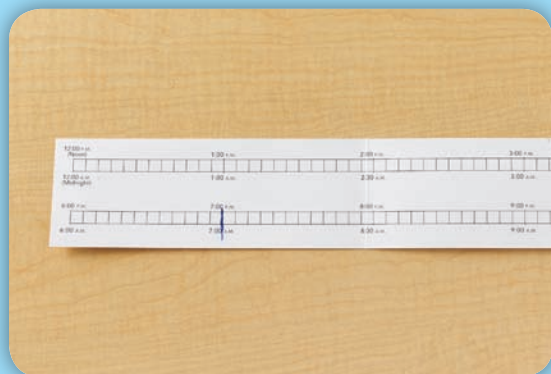
Toby wakes up at 7:00. It takes him 15 minutes to eat breakfast, 5 minutes to pack a lunch, and 10 minutes to get himself and his belongings ready for school. How much time will Toby need before leaving for school? What time will he be ready to leave?



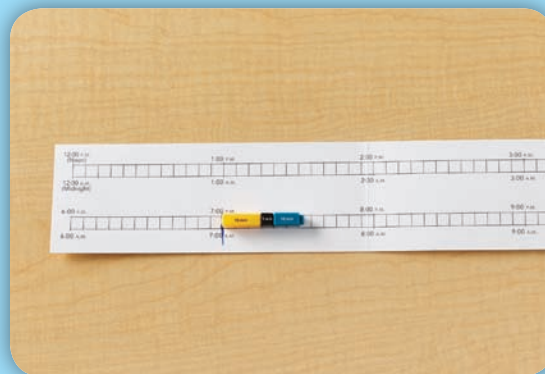
Introduce the problem. Then have students do the activity to solve the problem. Distribute Time Interval Rods, Write-On/Wipe-Off Clocks, Time Work Mats, and markers to students.

Materials

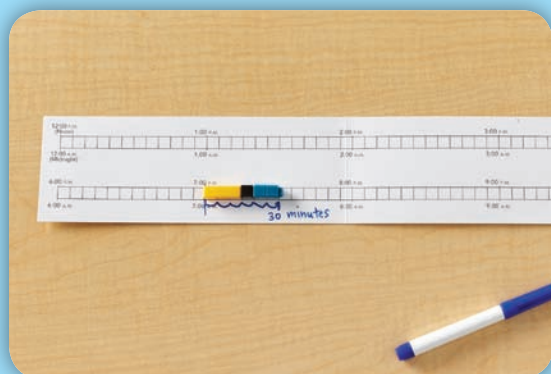
- Time Interval Rods (1 set per group)
- Time Work Mats (1 per student)
- Write-On/Wipe-Off Student Clock (1 per student)
- dry erase markers (1 set per group)



1. Ask: What does Toby need to do before he goes to school? Briefly review Toby's activities and tell students they will be adding up the amounts of time it takes Toby to complete them. **Ask:** What time does Toby wake up? **Say:** Locate the time Toby wakes up on your work mat.



2. Say: Let's go through the activities Toby does. **Ask:** What's first? Have students place a Time Interval Rod on their work mats to show the time Toby spends eating breakfast. Then have them do the same for the time he spends packing his lunch and for the time he spends getting himself and his belongings ready.



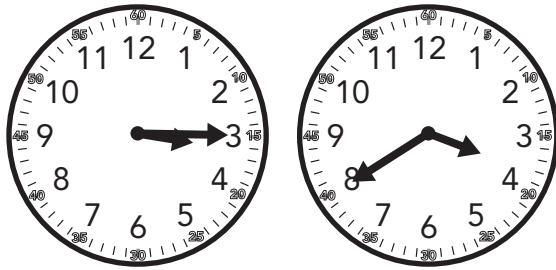
3. Say: To find out how much time it takes Toby to go through his morning activities we will add the interval pieces together. Have students count by 5s as they follow the scored intervals on the Time Interval Rods.



4. Say: Now use your clocks to show what time Toby is ready to leave. **Ask:** What time did Toby wake up? How much time does he spend completing his morning activities? Have students count out the time in 5-minute intervals, moving the clock hands while counting. Have them write the time Toby leaves on their clocks.

Use a Write-On/Wipe-Off Clock to model the start time and add the time intervals. Write the end time. (Check students' work.)

1. Start at 3:15. Add 15 minutes, then 10 minutes.

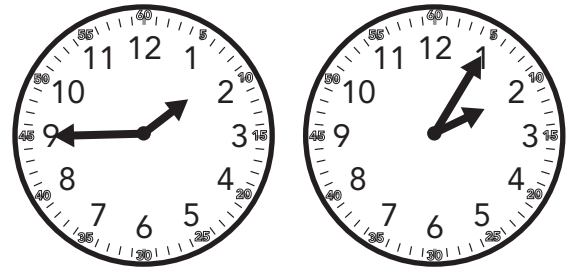


Start

End

End time: 3:40

2. Start at 1:45. Add 5 minutes, then 15 minutes.



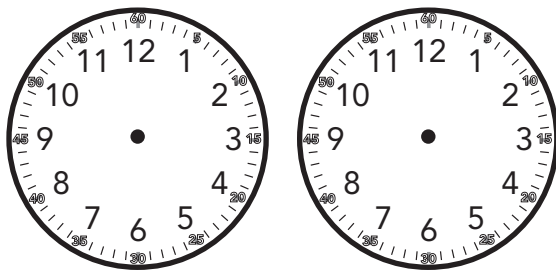
Start

End

End time: 2:05

Using a Write-On/Wipe-Off Clock, model the start time and given time intervals. Draw the clock hands to show the start and end times. Write the end time. (Check students' models.)

3. Start at 6:30. Add 30 minutes, then 15 minutes.

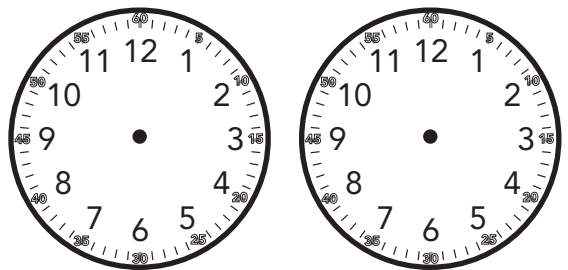


Start

End

End time: 7:15

4. Start at 9:10. Add 10 minutes, then 20 minutes.



Start

End

End time: 9:40

Find the end time.

5. Start at 2:00. Add 40 minutes, then 10 minutes.

2:50

6. Start at 7:20. Add 15 minutes, then 20 minutes.

7:55

7. Start at 4:10. Add 25 minutes, then 10 minutes.

4:45

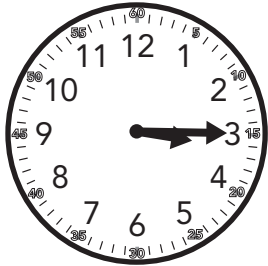
Answer Key

Challenge! Model Problems 5, 6, and 7 using Time Interval Rods with Time Work Mats. Do you prefer to use rods or clocks when adding times? Explain.

Challenge: Answers will vary. Look for explanations to match stated preferences.

Use a Write-On/Wipe-Off Clock to model the start time and add the time intervals. Write the end time.

1. Start at 3:15. Add 15 minutes, then 10 minutes.



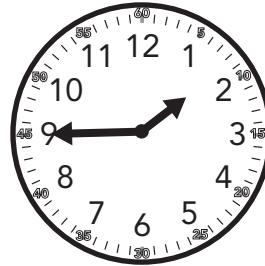
Start



End

End time: _____

2. Start at 1:45. Add 5 minutes, then 15 minutes.



Start

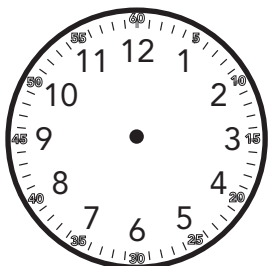


End

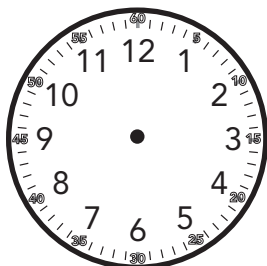
End time: _____

Using a Write-On/Wipe-Off Clock, model the start time and given time intervals. Draw the clock hands to show the start and end times. Write the end time.

3. Start at 6:30. Add 30 minutes, then 15 minutes.



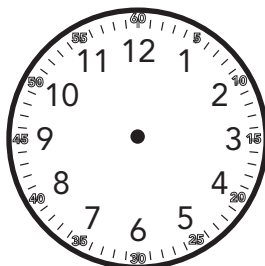
Start



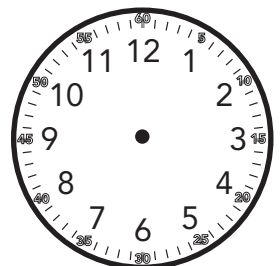
End

End time: _____

4. Start at 9:10. Add 10 minutes, then 20 minutes.



Start



End

End time: _____

Find the end time.

5. Start at 2:00.
Add 40 minutes,
then 10 minutes.

6. Start at 7:20.
Add 15 minutes,
then 20 minutes.

7. Start at 4:10.
Add 25 minutes,
then 10 minutes.

Name _____

Challenge! Model Problems 5, 6, and 7 using Time Interval Rods with Time Work Mats. Do you prefer to use rods or clocks when adding times? Explain.

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