

LESSON 1

Objective

Tell time to the hour, half hour, quarter hour, and minute on analog and digital clocks.

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

Telling Time

Time is a very abstract concept. We live in a digital world; therefore, students have less and less exposure to analog clocks. Teachers can help make the concept more understandable if they incorporate time into their classes on a daily basis. Experience using an analog clock helps a student see how time is divided up into smaller units.

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

Talk About It

Discuss the Try It! activity.

- Review the terms *quarter after* and *half past*. **Ask:** What do you think it means if the time is a quarter to 12:00? Have students compare $\frac{1}{4}$ Deluxe Rainbow Fraction® Circles to Write-On/Wipe-Off Student Clocks and identify and model 11:45.
- **Ask:** How can we tell if a written time is in the morning or at night? Discuss the difference between A.M. and P.M. Have students model and write 9:00 A.M. and then 9:00 P.M. on their clocks.

Solve It

With students, reread the problem. Have students make a schedule of picture times. They should list each in digital form and draw a picture of a clock face to show each in analog form. **Say:** Mrs. Kennedy wants to add another picture time at a quarter to 11:00 in the morning. Have students add this time in analog and digital forms to their picture schedules.

More Ideas

For other ways to teach about telling time—

- Have students create their own movie schedule with at least seven movies. On the schedule, there must be at least one movie in the morning, one in the afternoon, one that starts before the half hour, one that starts past the half hour, one that starts at a quarter after the hour, and one that starts at a quarter to the hour. After students write their schedule using digital forms, have them model each time on the Write-On/Wipe-Off Clocks.
- Have students work in pairs to take turns quizzing each other about telling time. One student models a time on the analog clock, and the other writes the time in digital form. Then the first student provides a digital time and the partner models the analog. Then students switch roles.

Formative Assessment

Have students try the following problem.

Mrs. Barnes told her class that lunch is at a quarter after twelve. What is another way to write the time for lunch?

- A. 11:45 A.M. B. 12:15 P.M. C. 12:30 P.M. D. 12:45 P.M.

Try It! 30 Minutes | Groups of 4

Here is a problem about telling time.

Mrs. Kennedy's class is going to have their school pictures taken. The first group will go at a quarter after 11:00 A.M., the second will go at half past 1:00 P.M., and the third will go at 2:55 P.M. How can the students tell the picture times on both the round clock on the wall and the digital clock on Mrs. Kennedy's desk?

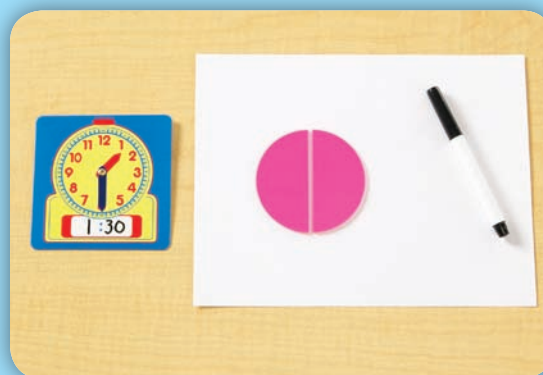
Introduce the problem. Then have students do the activity to solve the problem. Distribute Write-On/Wipe-Off Clocks and Fraction Circles to students. Write the three picture times on the board: a quarter after 11:00 A.M., half past 1:00 P.M., and 2:55 P.M.

Materials

- Write-On/Wipe-Off Student Clock (1 per student)
- Deluxe Rainbow Fraction® Circles (1 set per group)
- paper (1 sheet per group)
- dry erase markers (1 set per group)



1. Say: "Quarter after" is a way of saying that one quarter, or one-fourth, of an hour has passed. Have students compare the $\frac{1}{4}$ circle pieces to the clock face. **Ask:** Where should the minute hand on the clock be when one quarter of an hour has passed? (on 3) **Ask:** If the time is a quarter after 11:00, where should the hour hand be? (just past 11) Guide students to write the time in digital form under the clock: 11:15.



2. Ask: What do you think "half past 1:00 P.M." means? Have students compare the $\frac{1}{2}$ circle pieces to the clock to see that half past 1:00 P.M. means that one half of an hour has passed since 1:00. **Ask:** Where should the hands be to show half past 1:00? Help students model and write 1:30 on their clocks.



3. Ask: Where should the minute hand be for 2:55? Where should the hour hand be? Have students model and write 2:55 on their clocks.

Look Out!

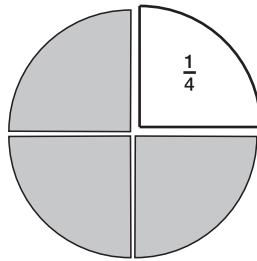
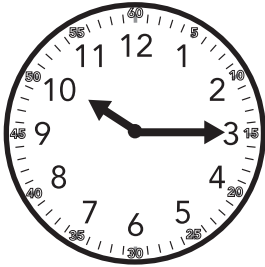
Watch out for students who successfully move the minute hand but do not correctly advance the hour hand to correspond. For example, when showing 1:30, students may move the minute hand to the 6 but point the hour hand directly at the 1 instead of midway between the 1 and the 2. Help students identify the correct placement of the hour hand. Point out that 1:30 is halfway between 1:00 and 2:00, so the hour hand should be halfway between the numbers 1 and 2 on the clock.



Use a Write-On/Wipe-Off Clock to model the time on each clock. Use Fraction Circles to model the number of minutes shown by the minute hand. Write the time in standard form and then using the words *quarter* or *half*.

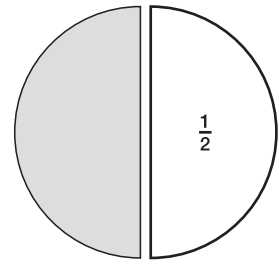
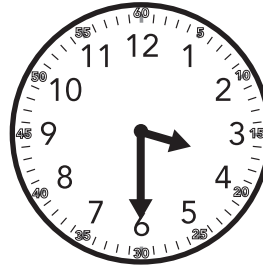
(Check students' work.)

1.



Time: 10:15
quarter after 10

2.

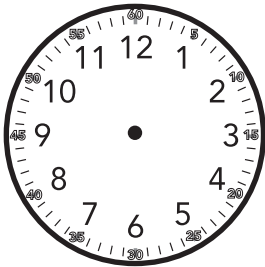


Time: 3:30
half past 3

Using a Write-On/Wipe-Off Clock and Fraction Circles, model each time given. Sketch the minute and hour hands on the clock. Write the time using numbers.

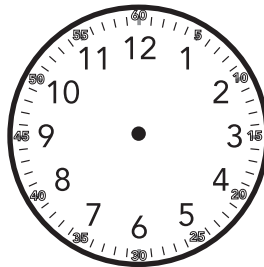
(Check students' models.)

3. half past noon



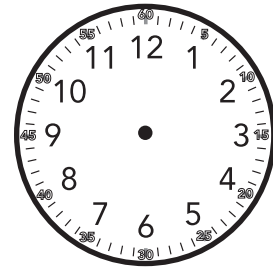
12:30

4. quarter after 5



5:15

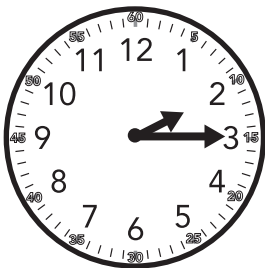
5. 20 minutes after 8



8:20

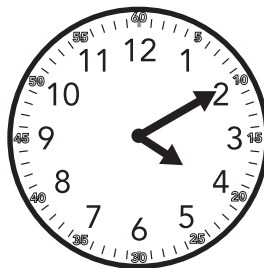
Write the time shown on each clock.

6.



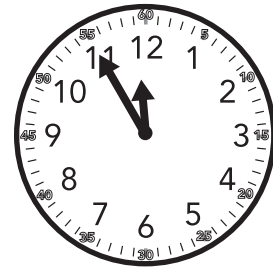
2:15

7.



4:10

8.



11:55

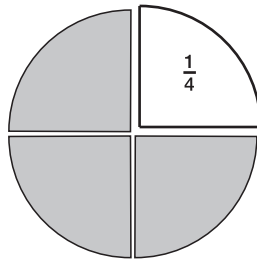
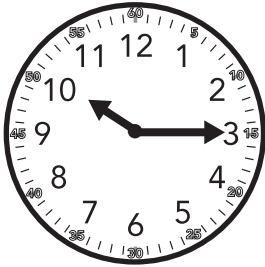
Answer Key

Challenge! What number on the face of a clock corresponds to the phrase “a quarter after”? What number on the face of a clock corresponds to the phrase “half past”? What number on the face of the clock corresponds to “a quarter to” the hour? Draw pictures to help.

Challenge: (Sample) The number on the clock that makes a quarter after the hour is 3. The number on the clock that makes half past the hour is 6. The number on the clock that makes a quarter to the hour is 9.

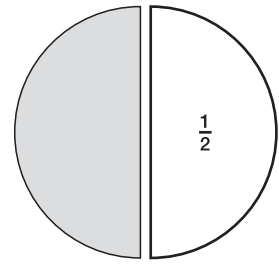
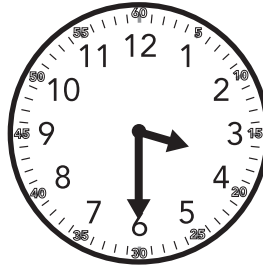
Use a Write-On/Wipe-Off Clock to model the time on each clock. Use Fraction Circles to model the number of minutes shown by the minute hand. Write the time in standard form and then using the words *quarter* or *half*.

1.



Time: _____

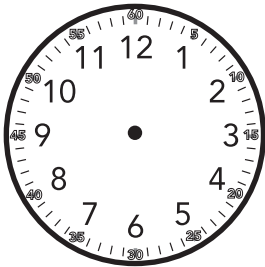
2.



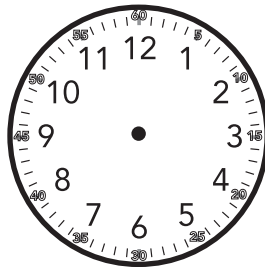
Time: _____

Using a Write-On/Wipe-Off Clock and Fraction Circles, model each time given. Sketch the minute and hour hands on the clock. Write the time using numbers.

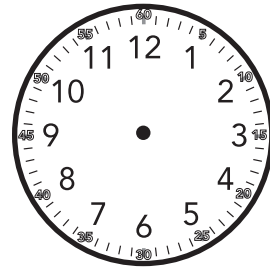
3. half past noon



4. quarter after 5

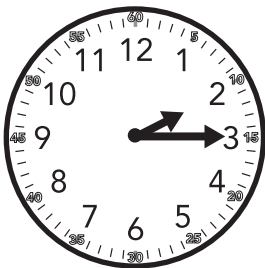


5. 20 minutes after 8

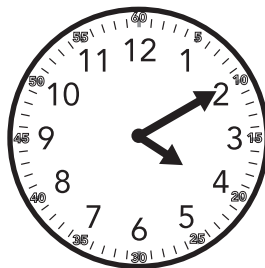


Write the time shown on each clock.

6.



7.



8.



Name _____

Challenge! What number on the face of a clock corresponds to the phrase “a quarter after”? What number on the face of a clock corresponds to the phrase “half past”? What number on the face of the clock corresponds to “a quarter to” the hour? Draw pictures to help.

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