

Clock Time Detectives

Read the hands. Estimate to a quarter hour.

GRADE 3 • 3.MDR.5.2

3.MDR.5.2 "Tell and write time to the nearest minute and estimate time to the nearest fifteen minutes (quarter hour) from the analysis of an analog clock."

NAME _____

DATE _____

For each clock, write the exact time to the nearest minute. Then estimate to the nearest quarter hour. Count the small marks when needed.

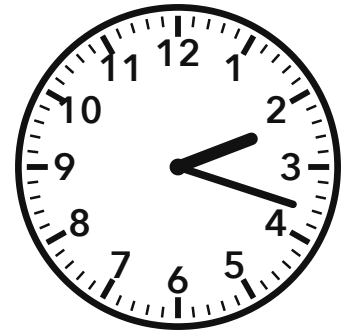
Count minutes carefully

Read the hour number the short hand has reached or just passed. Each small mark is one minute. Quarter hours fall at :00, :15, :30 and :45. Choose the closest quarter hour; it can be the next hour.

Try it together

Read this clock. Then choose the nearest quarter hour.

The short hand is past 2. The long hand is 3 small marks past the 3:
 $15 + 3 = 18$ minutes. 2:18 is 3 minutes from 2:15 and 12 minutes from 2:30. Exact time: 2:18. Nearest quarter hour: 2:15.



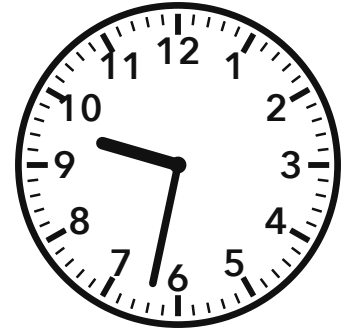
1. Read the minute

Write the exact time, then estimate it to the nearest quarter hour.



2. Past the half hour

Write the exact time and its nearest quarter hour.



3. Near an hour

Write the exact time and its nearest quarter hour.



4. Compare nearby times

Write the exact time and its nearest quarter hour. Why does its estimate differ from task 3?



5. Library clock

This clock shows when a library visit ends. Write the exact time and its nearest quarter hour.

**6. Lunch clock**

This clock shows when lunch starts. Write the exact time and its nearest quarter hour.

**7. Explain your estimate**

Write the exact time and its nearest quarter hour. Explain why your estimate is closer than the other nearby quarter hour.



Teacher notes

Judge the hands, not where the short hand is nearest. It moves between hour numbers as minutes pass. Require both exact times and estimates. Analog faces alone do not distinguish a.m. from p.m.; either may be used if requested in class.

Task 1

4:47; nearest quarter hour 4:45.

Task 2

9:32; nearest quarter hour 9:30.

Task 3

3:07; nearest quarter hour 3:00.

Task 4

3:08; nearest quarter hour 3:15. At 3:07, 3:00 is 7 minutes away and 3:15 is 8 away. At 3:08, 3:15 is 7 away and 3:00 is 8 away.

Task 5

11:58; nearest quarter hour 12:00. Rounding crosses into the next hour, 12.

Check the reasoning and units as well as the answer.

Task 6

12:23; nearest quarter hour 12:30.

Check the reasoning and units as well as the answer.

Task 7

6:38; nearest quarter hour 6:45. It is 7 minutes before 6:45 and 8 minutes after 6:30.