

## Just in Time Quick Check

### Standard of Learning 2.MG.2

#### **Strand:** Measurement and Geometry

#### **Standard of Learning 2.MG.2**

**The student will demonstrate an understanding of the concept of time to the nearest five minutes, using analog and digital clocks.**

*Students will demonstrate the following Knowledge and Skills:*

- a) Identify the number of minutes in an hour (60 minutes) and the number of hours in a day (24 hours).
- b) Determine the unit of time (minutes, hours, days, or weeks) that is most appropriate when measuring a given activity or context and explain reasoning (e.g., Would you measure the time it takes to brush your teeth in minutes or hours?).
- c) Show, tell, and write time to the nearest five minutes, using analog and digital clocks.
- d) Match a written time (e.g., 1:35, 6:20, 9:05) to the time shown on an analog clock to the nearest five minutes.

#### Just in Time Quick Check

#### Just in Time Quick Check Teacher Notes

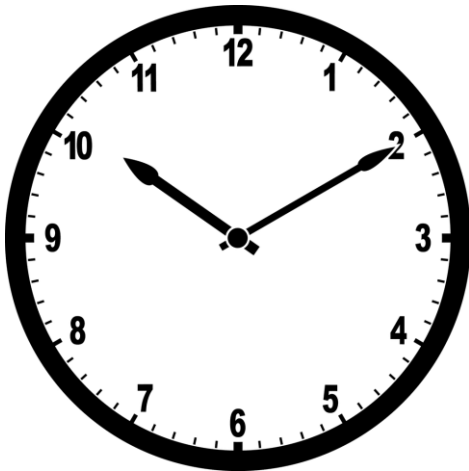
**Supporting and Prerequisite SOL:** 1.NS.1c, 1.MG.3

Just in Time Quick Check 2.MG.2

1. Write the digital time for each analog clock.



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2. Circle the digital time that matches the time shown on the clocks below.

6:04



4:30

3:30

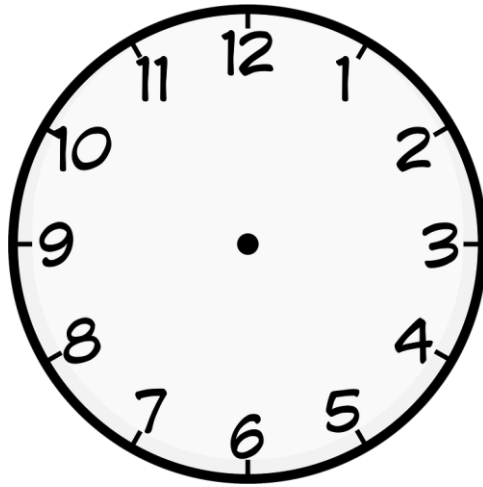
4:40



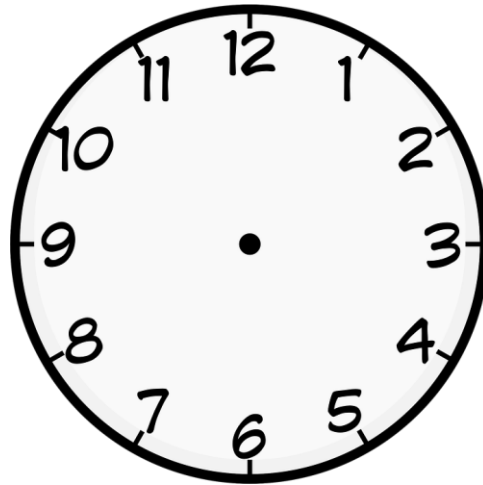
5:40

8:05

3. Show the time 4:10 on the clock.



4. Show the time 11:45 on the clock.



5. Juan stayed with his grandparents for one day. How many hours are in one day?
6. Anna went bowling for one hour. How many minutes are in one hour?
7. Circle the unit that is best used to measure the length of time it takes to complete the given activity.

Waiting for a package to arrive in the mail	minutes	hours	days	weeks
Heating leftovers in a microwave	minutes	hours	days	weeks
Walking from your classroom to the cafeteria	minutes	hours	days	weeks
Driving to another city for a short day trip	minutes	hours	days	weeks
Training for a sports tournament	minutes	hours	days	weeks

## 2.MG.2 Just in Time Quick Check Teacher Notes

### Common Errors/Misconceptions and their Possible Indications

1. Write the digital time for each analog clock.



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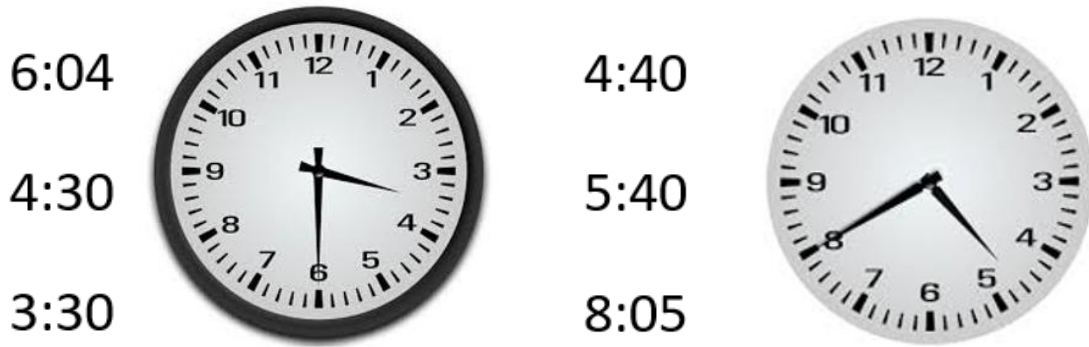
*Students may struggle to write the correct time represented by the clocks. They may write the time as 7:1 or 1:7, which may indicate that students do not understand the difference between the hour and minute hands and/or they may not understand that the minute hand progresses by 5s. Another common error is for students to write 7:5, which may indicate that they understand the hour and minute hands but struggle with the notation used to record time when the number of minutes is represented by a single digit. These students will need additional opportunities to practice writing the time represented on clocks. Having students read and record the time on the classroom clock throughout the day will be beneficial in developing the ability to record various clock times.*



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*A common error that students may make when reading time on a clock is to confuse the hour and minute hands. These students may write 2:10 or 10:2 or 2:50. For these students, it may be beneficial to spend time using only the hour hand and talking about things that happen at certain hours of the day and then have students notice where the hour hand is pointing. The use of geared clocks can also be beneficial as they illustrate how the position of the hour hand changes as the minute hand progresses around the clock.*

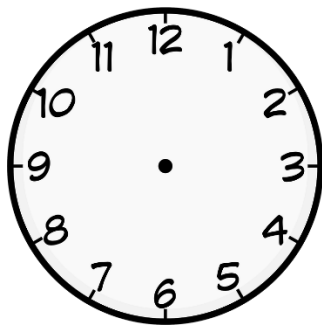
2. Circle the digital time that matches the time shown on the clocks below.



*Students may incorrectly choose 4:30 for the first clock, suggesting that they are struggling to identify the correct hour when the hour hand is between two numbers (e.g., between the 3 and 4 in this example). These students may benefit from hearing their peers describe the time and their reasoning to support their answers. Using a geared clock will help students see all the times that come between 3:00 and 4:00 and how the position of the hour hand changes as time moves forward (i.e., recognizing that the time is in the three o'clock hour because the minute hand has not made it around the clock to reach four o'clock).*

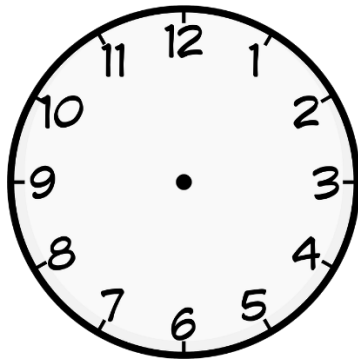
*Students who are still struggling to count by fives may miscount or may look for 4:35 or 4:45 for the second clock because they failed to start counting by fives at the 1. These students need additional opportunities to develop their skills in counting by fives and in making sense of each five minute interval on the clock. Activities such as counting around the room by fives (i.e., the number of fingers on each hand) may be beneficial.*

3. Show the time 4:10 on the clock.



*A common error that students make when recording time on a clock is to confuse the hour and minute hands. These students may place the minute hand on the 4 and the hour hand on the 10. These students may benefit from telling and recording time by only using the hour hand and talking about things that happen at certain hours of the day. Other students may correctly place the hour hand but place the minute hand on the 10.*

4. Show the time 11:45 on the clock.



*Some students may correctly place the hour hand near or between the 11 and the 12 but struggle to correctly place the minute hand on the 9 to represent 45 minutes past 11. These students may place the minute hand between the 4 and 5, using the numbers in 11:45 literally versus thinking about 45 minutes past 11, or they may miscount by fives when counting around the clock, thereby placing the minute hand on the 8 or the 10. These students likely need additional opportunities to count by fives, and in particular, practice counting by fives around the clock.*

*Telling time is a skill that develops over an extended period. Students will benefit from opportunities to read and record the time shown on a clock during different intervals throughout their day. Students should record the time on their paper/assignment, practice reading the time, and explain how they know the time. Referring to the time shown on the clock throughout the day will help students to develop meaning for telling time and provide practice within the context of their day.*

5. Juan stayed with his grandparents for one day. How many hours are in one day?

*Students may believe that there are 12 hours in a day because the numbers one through twelve are visible on an analog clock face. Students may benefit from classroom discussions that highlight a.m. and p.m. to reinforce the number of hours in one day.*

6. Anna went bowling for one hour. How many minutes are in one hour?

*Students may believe that there are 12 minutes in an hour because the numbers one through twelve are visible on an analog clock face. Students may benefit from a discussion of the tick marks on the face of the clock and how they show the number of minutes in an hour.*

7. Circle the unit that is best used to measure the length of time it takes to complete the given activity.

Waiting for a package to arrive in the mail	minutes	hours	days	weeks
Heating leftovers in a microwave	minutes	hours	days	weeks
Walking from your classroom to the cafeteria	minutes	hours	days	weeks
Driving to another city for a short day trip	minutes	hours	days	weeks
Training for a sports tournament	minutes	hours	days	weeks

*Students may have misconceptions about the size of time units. Students may believe that an hour is only “a few minutes longer” than a minute or that a day is only “a little longer” than an hour. Students may also overestimate or underestimate the duration of various activities based on their feelings about the activities. For example, students may believe that heating leftovers in a microwave takes hours because it feels like a long time to wait when they are hungry. Students may benefit from opportunities to connect classroom experiences to units of time. Use a stopwatch to time how long it takes to walk to the gym or art room, then discuss how many minutes it took with the class. Use a timer to time how long it takes from arrival at school until lunch time or use a calendar to note how many weeks the class practices for a choral performance or play.*