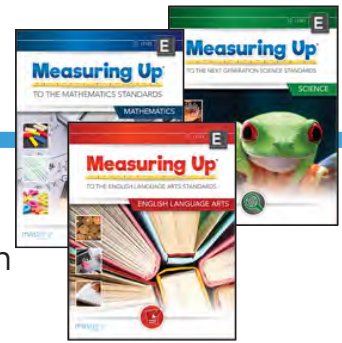


Try It Out! Sample Pack | Math | Grade 3 | Lesson 17

Measuring Up to the Standards



The **Try It Out!** sample pack features:

- 1 full student lesson with complete Teacher Edition lesson
- 1 full Table of Contents for your grade level
- Correlation to the standards

Developed to meet the rigor of the standards, **Measuring Up** employs support for using and applying critical thinking skills with direct standards instruction that elevate and engage student thinking.

Standards-based lessons feature introductions that set students up for success with:

- ✓ Vocabulary in Action
- ✓ Relevant real-world connections
- ✓ Clearly identified learning goals
- ✓ Connections to prior learning

Guided Instruction and Independent Learning strengthen learning with:

- ✓ Deep thinking prompts
- ✓ Collaborative learning
- ✓ Self-evaluation
- ✓ Demonstration of problem-solving logic
- ✓ Application of higher-order thinking

Flexible design meets the needs of whole- or small-group instruction. Use for:

- ✓ Introducing standards
- ✓ Reinforcement or standards review
- ✓ Intervention
- ✓ Remediation
- ✓ Test Preparation

Extend learning with online digital resources!

Measuring Up Live 2.0 blends instructional print resources with online, dynamic assessment and practice. Meet the needs of all students for standards mastery with resources that pinpoint student needs with customized practice.



WORDS TO KNOW

midnight

noon

a.m.

p.m.

Lesson 17

SOLVE PROBLEMS INVOLVING TIME 3.MD.A.1

INTRODUCTION

Real-World Connection

Andy got home from school at 3:35 p.m. It took him 10 minutes to eat a snack, and 5 minutes to change his clothes. Then it took him 15 minutes to bicycle back to school. At what time will he arrive at school for running practice? Let's practice the skills in the **Guided Instruction** and **Independent Practice** and see what time Andy arrives at school at the end of the lesson!



What I Am Going to Learn

- How to tell how much time has passed between events
- How to use a number line to solve addition and subtraction problems involving time

What I May Already Know 2.MD.C.7, 2.MD.B.6

- I know how to tell time on an analog or digital clock.
- I know how to write time to the nearest 5 minutes.
- I know how to represent whole numbers on a number line.

Vocabulary in Action

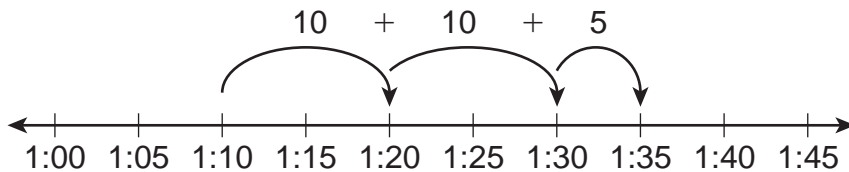
- Different parts of the day are named differently.
 - Times after **midnight** (12:00 at night) and before **noon** (12:00 in the daytime) are written as **a.m.** times.
 - Times after noon and before midnight are written as **p.m.** times.
 - There are 24 hours in a day. Twelve are a.m. hours and 12 are p.m. hours

- You can solve problems that involve time in different ways.
 - A number line is helpful to see how much time has passed between events.
 - Subtraction or addition can also be used.

EXAMPLE

A video starts at 1:10 pm. It ends at 1:35 pm. How long is the video?

Use a number line:



Find what time the video starts. Count on to the end time.

$$10 + 10 + 5 = 25$$

The video is 25 minutes long.

TIPS AND TRICKS

If the video was half an hour, it would end at 1:40 pm. Since it ends at 1:35 pm, it is 5 minutes less than 30 minutes. Using benchmark times like 15, 30, and 60 minutes can make finding the answer easier.

You can also add the amount of time that has passed to the start time.

EXAMPLE

Harry starts washing dishes at 10:13 a.m. He washes for 15 minutes. At what time does Harry finish washing dishes?

Add the times:

$$\begin{array}{r} 10:13 \text{ start time} \\ + 00:15 \text{ amount of time to wash dishes} \\ \hline 10:28 \text{ end time} \end{array}$$

Harry finishes washing dishes at 10:28 a.m.

SKETCH IT

Draw a number line in the space below showing how you could find what time Harry finished washing dishes.

EXAMPLE



Recess starts at 10:15 a.m. and ends at 10:35 a.m. How long does recess last?

Subtract the times:

$$\begin{array}{r} 10:35 \text{ end time} \\ - 10:15 \text{ start time} \\ \hline 0:20 \end{array}$$

Recess is 20 minutes long.

GUIDED INSTRUCTION

Sometimes you start doing something because you are waiting to do something else at a certain time. Maybe you start reading because soccer practice is in half an hour.

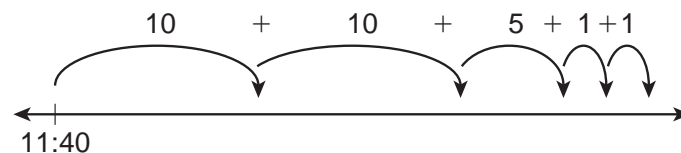
1. Abe starts reading at 11:40 a.m. He stopped reading 27 minutes later.

At what time did Abe stop reading?

Step One Use a number line to represent the problem.

Write 11:40 as the starting time.

Count on to reach 27 minutes.

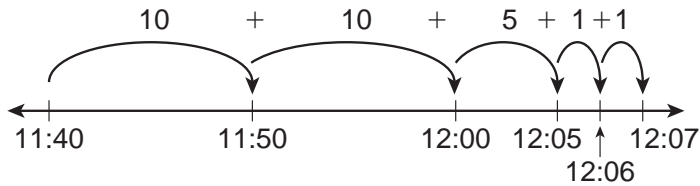


HINT, HINT

If an event lasts past the hour, it helps to count the time up to the hour and then after the hour.

Step Two Write the times of each jump on the number line.

The end of the last jump is the time Abe stopped reading.



Step Three Solve the problem, making sure to include a.m. or pm. in your answer.

Abe stopped reading at 12:07 pm.

2. Cody rode the bus to his grandmother's house. Cody got on the bus at 1:36 pm. He got off the bus at 1:49 pm. How long was Cody's bus ride?

Step One Use subtraction to find the difference.

$$\begin{array}{r} 1:49 \text{ end time} \\ - 1:36 \text{ start time} \\ \hline 0:13 \text{ amount of time on the bus} \end{array}$$

Step Two Solve the problem.

Cody's bus ride was minutes long.

3. The table shows the start and end times of two events at the zoo.

What times complete the table?

Write your answers in the boxes.

Event	Start time	End time	Event length
Lion feeding	12:15 pm.		17 minutes
Gorilla viewing	2:10 pm.	2:35 pm.	

TURN AND TALK

You have several ways to think about solving problems with time. Which method do you understand best? Why?

TIPS AND TRICKS

On a computer-based test, you might fill in boxes to answer questions. Look at the table carefully. Decide if you should add or subtract to find the answers. Then fill in the missing information. Remember to include a.m. or pm. in your answer if your answer is a time.

TURN AND TALK

Work with a partner. Pick two activities you do on a school day such as getting dressed or going to school. Think about how much time each activity takes. Write two time problems about your activities where start time, end time, or elapsed time needs to be calculated. Then solve the problems.

Color in the traffic signal that shows how you are doing with the skill.



How Am I Doing?

What questions do you have?

Determine how much time goes by between the start of your school day and your first recess. Explain.

How long does it take to get home from school? How long is lunch? What are some other situations where you figure out how long something takes?

INDEPENDENT PRACTICE

Answer the questions.

1. Gus started walking to school at 7:28 a.m. He arrived at school 15 minutes later. When did Gus arrive at school?

- (A) 7:13 a.m.
- (B) 7:43 a.m.
- (C) 7:45 a.m.
- (D) 7:48 a.m.

2. Jamal is going to meet his family at the hiking trail at 12:00 p.m. Jamal arrives 20 minutes early. When does Jamal arrive at the hiking trail?

Use a.m. or pm. Write your answer in the box.

3. The table shows the starting and ending times of some movies. Which movies are longer than 20 minutes? Select the three correct answers.

Movie title	Start time	End time
Bees Buzz	10:05 a.m.	10:17 a.m.
Whale Songs	10:35 a.m.	10:57 a.m.
When Birds Fly	11:15 a.m.	11:41 a.m.
Total Tornadoes	12:40 pm.	12:55 pm.
3, 2, 1, Liftoff!	1:10 pm.	1:30 pm.
Our Green Earth	2:25 pm.	3:00 pm.

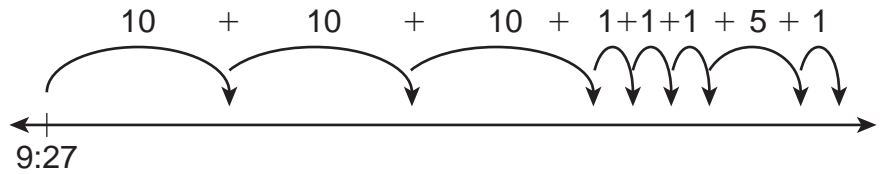
- (A) Bees Buzz
- (B) Whale Songs
- (C) When Birds Fly
- (D) Total Tornadoes
- (E) 3, 2, 1, Liftoff!
- (F) Our Green Earth

TIPS AND TRICKS

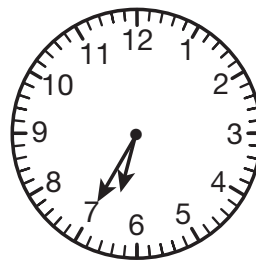
You know from the question that three of the answers are correct. Read each row of the table. Find the difference between the start and end times. Select all the answer choices that name movies with lengths greater than 20 minutes.

WORK SPACE

4. Juan went into the grocery store at 9:27 a.m. He left the grocery store at 10:06 a.m. How long was Juan in the store? You can use the number line to help you solve the problem.



- (A) 29 minutes
 (B) 35 minutes
 (C) 37 minutes
 (D) 39 minutes
5. Kyra got home from her dance lesson at 6:35 pm. It took her 30 minutes to eat dinner, and 10 minutes to take a bath. Then it took her 7 minutes to clean up her room and get ready to go to bed.



What time will Kyra be ready to go to bed?

You can use the clock to help you.

Circle the time that correctly completes the sentence.

Kyra is ready to go to bed at _____ pm.

7:15

7:22

7:52

8:15

8:22

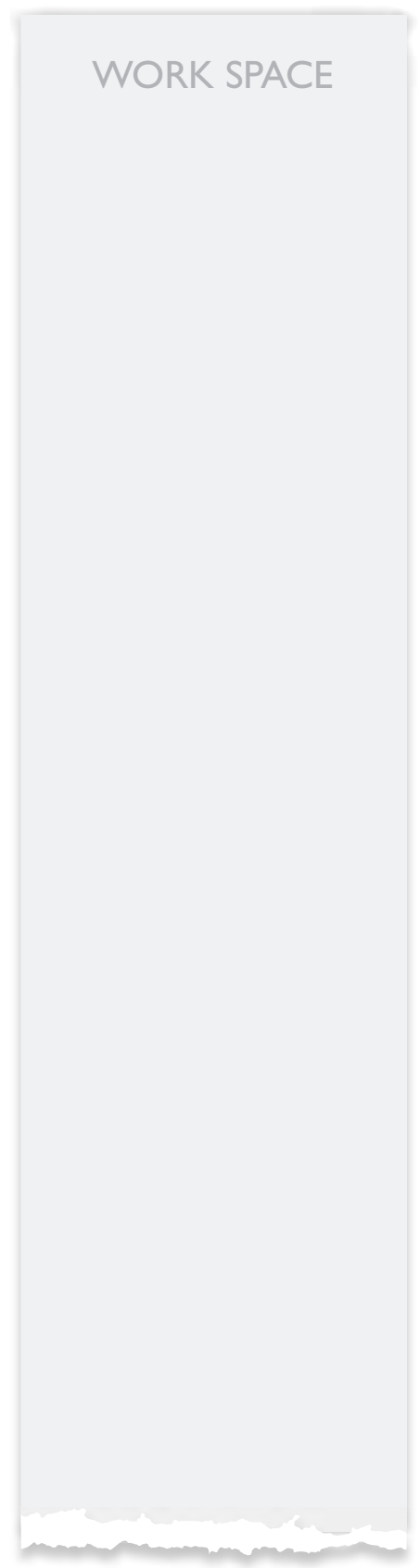
 **6. Part A**

Steven started working in his garden at 1:17 pm. He finished working at 1:59 pm. How can you figure out how long Steven worked in his garden?

 **Part B**

Draw a number line to represent how long Steven worked in the garden. Solve the problem. Explain your answer.

WORK SPACE



WORK SPACE

7. Sandy woke up 15 minutes before midnight. She had a cup of hot chocolate and went back to sleep 30 minutes later. What time did Sandy wake up? What time did she go back to sleep? Use a.m. or pm. for each time. Explain your answer.

EXIT TICKET

3.MD.A.1

Now that you have mastered solving addition and subtraction problems with time, let's solve the problem in the Real-World Connection.

Andy got home from school at 3:35 pm. It took him 10 minutes to eat a snack and 5 minutes to change clothes. Then, it took him 15 minutes to ride his bike back to school. At what time did he arrive at school for running practice?

ANNOTATED TEACHER EDITION

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CORRELATIONS

Correlation to the Common Core State Standards

This worktext is customized to the Common Core State Standards for Mathematics.

Most lessons focus on one content standard for in-depth review.

Mathematical Practices are interwoven throughout each lesson to connect practices to content at point-of-use and promote depth of understanding.

Common Core State Standards	Lessons
3.OA Operations and Algebraic Thinking	
A. Represent and solve problems involving multiplication and division.	
1. Interpret products of whole numbers, e.g., interpret 5×7 as the total number of objects in 5 groups of 7 objects each. <i>For example, describe a context in which a total number of objects can be expressed as 5×7.</i>	1
2. Interpret whole-number quotients of whole numbers, e.g., interpret $56 \div 8$ as the number of objects in each share when 56 objects are partitioned equally into 8 shares, or as a number of shares when 56 objects are partitioned into equal shares of 8 objects each. <i>For example, describe a context in which a number of shares or a number of groups can be expressed as $56 \div 8$.</i>	2
3. Use multiplication and division within 100 to solve word problems in situations involving equal groups, arrays, and measurement quantities, e.g., by using drawings and equations with a symbol for the unknown number to represent the problem.	6
4. Determine the unknown whole number in a multiplication or division equation relating three whole numbers. <i>For example, determine the unknown number that makes the equation true in each of the equations $8 \times ? = 48$, $5 = _ \div 3$, $6 \times 6 = ?$</i>	3
B. Understand properties of multiplication and the relationship between multiplication and division.	
5. Apply properties of operations as strategies to multiply and divide. ² <i>Examples: If $6 \times 4 = 24$ is known, then $4 \times 6 = 24$ is also known. (Commutative property of multiplication.) $3 \times 5 \times 2$ can be found by $3 \times 5 = 15$, then $15 \times 2 = 30$, or by $5 \times 2 = 10$, then $3 \times 10 = 30$. (Associative property of multiplication.) Knowing that $8 \times 5 = 40$ and $8 \times 2 = 16$, one can find 8×7 as $8 \times (5 + 2) = (8 \times 5) + (8 \times 2) = 40 + 16 = 56$. (Distributive property.)</i>	4
6. Understand division as an unknown-factor problem. <i>For example, find $32 \div 8$ by finding the number that makes 32 when multiplied by 8.</i>	3
C. Multiply and divide within 100.	
7. Fluently multiply and divide within 100, using strategies such as the relationship between multiplication and division (e.g., knowing that $8 \times 5 = 40$, one knows $40 \div 5 = 8$) or properties of operations. By the end of Grade 3, know from memory all products of two one-digit numbers.	4
D. Solve problems involving the four operations, and identify and explain patterns in arithmetic.	
8. Solve two-step word problems using the four operations. Represent these problems using equations with a letter standing for the unknown quantity. Assess the reasonableness of answers using mental computation and estimation strategies including rounding.	9
9. Identify arithmetic patterns (including patterns in the addition table or multiplication table), and explain them using properties of operations. <i>For example, observe that 4 times a number is always even, and explain why 4 times a number can be decomposed into two equal addends.</i>	10

CORRELATIONS

Common Core State Standards	Lessons
3.NBT Number and Operations in Base Ten	
A. Use place value understanding and properties of operations to perform multi-digit arithmetic.	
1. Use place value understanding to round whole numbers to the nearest 10 or 100.	7
2. Fluently add and subtract within 1000 using strategies and algorithms based on place value, properties of operations, and/or the relationship between addition and subtraction.	8
3. Multiply one-digit whole numbers by multiples of 10 in the range 10–90 (e.g., 9×80 , 5×60) using strategies based on place value and properties of operations.	5
3.NF Number and Operations-Fractions	
A. Develop understanding of fractions as numbers.	
1. Understand a fraction $\frac{1}{b}$ as the quantity formed by 1 part when a whole is partitioned into b equal parts; understand a fraction $\frac{a}{b}$ as the quantity formed by a parts of size $\frac{1}{b}$.	11
2. Understand a fraction as a number on the number line; represent fractions on a number line diagram.	12
a. Represent a fraction $\frac{1}{b}$ on a number line diagram by defining the interval from 0 to 1 as the whole and partitioning it into b equal parts. Recognize that each part has size $\frac{1}{b}$ and that the endpoint of the part based at 0 locates the number $\frac{1}{b}$ on the number line.	12
b. Represent a fraction $\frac{a}{b}$ on a number line diagram by marking off a length $\frac{a}{b}$ from 0. Recognize that the resulting interval has size $\frac{a}{b}$ and that its endpoint locates the number $\frac{a}{b}$ on the number line.	12
3. Explain equivalence of fractions in special cases, and compare fractions by reasoning about their size.	13, 14
a. Understand two fractions as equivalent (equal) if they are the same size, or the same point on a number line.	13
b. Recognize and generate simple equivalent fractions, e.g., $\frac{1}{2} = \frac{2}{4}$, $\frac{4}{6} = \frac{2}{3}$. Explain why the fractions are equivalent, e.g., by using a visual fraction model.	13
c. Express whole numbers as fractions, and recognize fractions that are equivalent to whole numbers. <i>Examples: Express 3 in the form $3 = \frac{3}{1}$; recognize that $\frac{6}{1} = 6$; locate $\frac{4}{4}$ and 1 at the same point of a number line diagram.</i>	13
d. Compare two fractions with the same numerator or the same denominator by reasoning about their size. Recognize that comparisons are valid only when the two fractions refer to the same whole. Record the results of comparisons with the symbols $>$, $=$, or $<$, and justify the conclusions, e.g., by using a visual fraction model.	14
3.MD Measurement and Data	
A. Solve problems involving measurement and estimation of intervals of time, liquid volumes, and masses of objects.	
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.	16, 17

Common Core State Standards	Lessons
2. Measure and estimate liquid volumes and masses of objects using standard units of grams (g), kilograms (kg), and liters (l). Add, subtract, multiply, or divide to solve one-step word problems involving masses or volumes that are given in the same units, e.g., by using drawings (such as a beaker with a measurement scale) to represent the problem.	18, 19
B. Represent and interpret data.	
3. Draw a scaled picture graph and a scaled bar graph to represent a data set with several categories. Solve one- and two-step “how many more” and “how many less” problems using information presented in scaled bar graphs. <i>For example, draw a bar graph in which each square in the bar graph might represent 5 pets.</i>	20, 21
4. Generate measurement data by measuring lengths using rulers marked with halves and fourths of an inch. Show the data by making a line plot, where the horizontal scale is marked off in appropriate units— whole numbers, halves, or quarters.	22
C. Geometric measurement: understand concepts of area and relate area to multiplication and to addition.	
5. Recognize area as an attribute of plane figures and understand concepts of area measurement.	23
a. A square with side length 1 unit, called “a unit square,” is said to have “one square unit” of area, and can be used to measure area.	23
b. A plane figure which can be covered without gaps or overlaps by n unit squares is said to have an area of n square units.	23
6. Measure areas by counting unit squares (square cm, square m, square in, square ft, and improvised units).	23
7. Relate area to the operations of multiplication and addition.	24, 25
a. Find the area of a rectangle with whole-number side lengths by tiling it, and show that the area is the same as would be found by multiplying the side lengths.	24
b. Multiply side lengths to find areas of rectangles with whole-number side lengths in the context of solving real world and mathematical problems, and represent whole-number products as rectangular areas in mathematical reasoning.	24
c. Use tiling to show in a concrete case that the area of a rectangle with whole-number side lengths a and $b + c$ is the sum of $a \times b$ and $a \times c$. Use area models to represent the distributive property in mathematical reasoning.	25
d. Recognize area as additive. Find areas of rectilinear figures by decomposing them into non-overlapping rectangles and adding the areas of the non-overlapping parts, applying this technique to solve real world problems.	25
D. Geometric measurement: recognize perimeter as an attribute of plane figures and distinguish between linear and area measures.	
8. Solve real world and mathematical problems involving perimeters of polygons, including finding the perimeter given the side lengths, finding an unknown side length, and exhibiting rectangles with the same perimeter and different areas or with the same area and different perimeters.	26

CORRELATIONS

Common Core State Standards	Lessons
3.G Geometry	
A. Reason with shapes and their attributes.	
1. Understand that shapes in different categories (e.g., rhombuses, rectangles, and others) may share attributes (e.g., having four sides), and that the shared attributes can define a larger category (e.g., quadrilaterals). Recognize rhombuses, rectangles, and squares as examples of quadrilaterals, and draw examples of quadrilaterals that do not belong to any of these subcategories.	27
2. Partition shapes into parts with equal areas. Express the area of each part as a unit fraction of the whole. <i>For example, partition a shape into 4 parts with equal area, and describe the area of each part as $\frac{1}{4}$ of the area of the shape.</i>	15

WORDS TO KNOW

- midnight
- noon
- a.m.
- p.m.



Lesson 17

SOLVE PROBLEMS INVOLVING TIME 3.MD.A.1

INTRODUCTION

Real-World Connection

Andy got home from school at 3:35 pm. It took him 10 minutes to eat a snack, and 5 minutes to change his clothes. Then it took him 15 minutes to bicycle back to school. At what time will he arrive at school for running practice? Let's practice the skills in the Guided Instruction and Independent Practice and see what time Andy arrives at school at the end of the lesson!

What I Am Going to Learn

- How to tell how much time has passed between events
- How to use a number line to solve addition and subtraction problems involving time

What I May Already Know 2.MD.C.7, 2.MD.B.6

- I know how to tell time on an analog or digital clock.
- I know how to write time to the nearest 5 minutes.
- I know how to represent whole numbers on a number line.

Vocabulary in Action

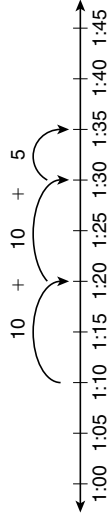
- Different parts of the day are named differently.
- Times after midnight (12:00 at night) and before noon (12:00 in the daytime) are written as a.m. times.
- Times after noon and before midnight are written as p.m. times.
- There are 24 hours in a day. Twelve are a.m. hours and 12 are p.m. hours

- You can solve problems that involve time in different ways.
- A number line is helpful to see how much time has passed between events.
- Subtraction or addition can also be used.

EXAMPLE

A video starts at 1:10 pm. It ends at 1:35 pm. How long is the video?

Use a number line:



Find what time the video starts. Count on to the end time.

$$10 + 10 + 5 = 25$$

The video is 25 minutes long.

You can also add the amount of time that has passed to the start time.

EXAMPLE

Harry starts washing dishes at 10:13 a.m. He washes for 15 minutes. At what time does Harry finish washing dishes?

Add the times:

$$\begin{array}{r} 10:13 \text{ start time} \\ + 00:15 \text{ amount of time to wash dishes} \\ \hline 10:28 \text{ end time} \end{array}$$

Harry finishes washing dishes at 10:28 a.m.

TIPS AND TRICKS

If the video was half an hour, it would end at 1:40 pm. Since it ends at 1:35 pm, it is 5 minutes less than 30 minutes. Using benchmark times like 15, 30, and 60 minutes can make finding the answer easier.

SKETCH IT

Draw a number line in the space below showing how you could find what time Harry finished washing dishes.

EXAMPLE



Recess starts at 10:15 a.m. and ends at 10:35 a.m. How long does recess last?

Subtract the times:

$$\begin{array}{r} 10:35 \text{ end time} \\ - 10:15 \text{ start time} \\ \hline 0:20 \end{array}$$

Recess is 20 minutes long.

GUIDED INSTRUCTION

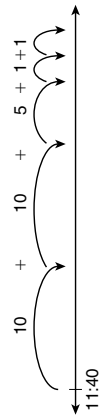
Sometimes you start doing something because you are waiting to do something else at a certain time. Maybe you start reading because soccer practice is in half an hour.

1. Abe starts reading at 11:40 a.m. He stopped reading 27 minutes later.

At what time did Abe stop reading?

Step One Use a number line to represent the problem. Write 11:40 as the starting time.

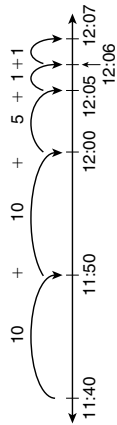
Count on to reach 27 minutes.



HINT, HINT

If an event lasts past the hour, it helps to count the time up to the hour and then after the hour.

Step Two Write the times of each jump on the number line. The end of the last jump is the time Abe stopped reading.



Step Three Solve the problem, making sure to include a.m. or pm. in your answer.

Abe stopped reading at 12:07 pm.

2. Cody rode the bus to his grandmother's house. Cody got on the bus at 1:36 pm. He got off the bus at 1:49 pm. How long was Cody's bus ride?

Step One Use subtraction to find the difference.

$$\begin{array}{r} 1:49 \text{ end time} \\ - 1:36 \text{ start time} \\ \hline 0:13 \text{ amount of time on the bus} \end{array}$$

Step Two Solve the problem.

Cody's bus ride was 13 minutes long.

TURN AND TALK

You have several ways to think about solving problems with time. Which method do you understand best? Why?

3. The table shows the start and end times of two events at the zoo.

What times complete the table?

Write your answers in the boxes.

Event	Start time	End time	Event length
Lion feeding	12:15 pm.	12:32 p.m.	17 minutes
Gorilla viewing	2:10 pm.	2:35 pm.	25 minutes

TIPS AND TRICKS

On a computer-based test, you might fill in boxes to answer questions. Look at the table carefully. Decide if you should add or subtract to find the answers. Then fill in the missing information. Remember to include a.m. or pm in your answer if your answer is a time.



How Am I Doing?

What questions do you have?

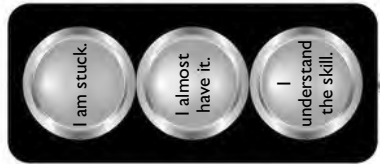
Determine how much time goes by between the start of your school day and your first recess. Explain.

How long does it take to get home from school? How long is lunch? What are some other situations where you figure out how long something takes?

TURN AND TALK

Work with a partner. Pick two activities you do on a school day such as getting dressed or going to school. Think about how much time each activity takes. Write two time problems about your activities where start time, end time, or elapsed time needs to be calculated. Then solve the problems.

Color in the traffic signal that shows how you are doing with the skill.



INDEPENDENT PRACTICE

Answer the questions.

1. Gus started walking to school at 7:28 a.m. He arrived at school 15 minutes later. When did Gus arrive at school?

- A 7:13 a.m.
- B 7:43 a.m.
- C 7:45 a.m.
- D 7:48 a.m.

2. Jamal is going to meet his family at the hiking trail at 12:00 p.m. Jamal arrives 20 minutes early. When does Jamal arrive at the hiking trail?

Use a.m. or p.m. Write your answer in the box.

11:40 a.m.

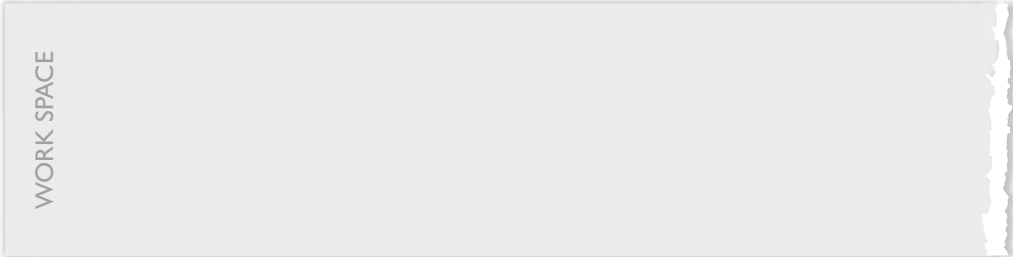
3. The table shows the starting and ending times of some movies. Which movies are longer than 20 minutes? Select the three correct answers.

Movie title	Start time	End time
Bees Buzz	10:05 a.m.	10:17 a.m.
Whale Songs	10:35 a.m.	10:57 a.m.
When Birds Fly	11:15 a.m.	11:41 a.m.
Total Tornadoes	12:40 pm.	12:55 pm.
3, 2, 1, Liftoff!	1:10 pm.	1:30 pm.
Our Green Earth	2:25 pm.	3:00 pm.

- A Bees Buzz
- B Whale Songs
- C When Birds Fly
- D Total Tornadoes
- E 3, 2, 1, Liftoff!
- F Our Green Earth

TIPS AND TRICKS

You know from the question that three of the answers are correct. Read each row of the table. Find the difference between the start and end times. Select all the answer choices that name movies with lengths greater than 20 minutes.



4. Juan went into the grocery store at 9:27 a.m. He left the grocery store at 10:06 a.m. How long was Juan in the store? You can use the number line to help you solve the problem.
- $10 + 10 + 10 + 10 + 1 + 1 + 1 + 5 + 1$
-
- A 29 minutes
 B 35 minutes
 C 37 minutes
 D 39 minutes

5. Kyra got home from her dance lesson at 6:35 pm. It took her 30 minutes to eat dinner, and 10 minutes to take a bath. Then it took her 7 minutes to clean up her room and get ready to go to bed.

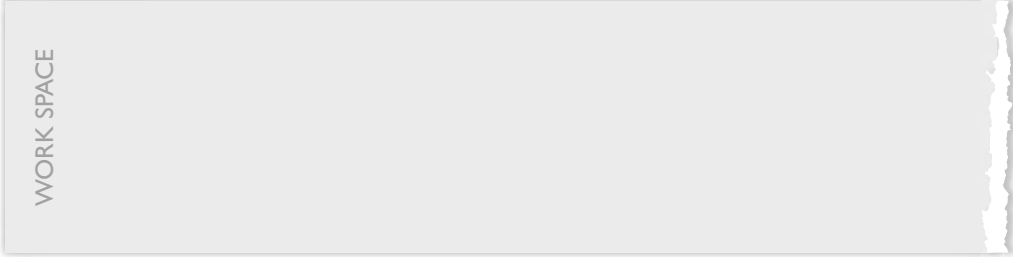


What time will Kyra be ready to go to bed? You can use the clock to help you.

Circle the time that correctly completes the sentence.

Kyra is ready to go to bed at 7:15 pm.

7:22
 7:52
 8:15
 8:22



6. **Part A**
 Steven started working in his garden at 1:17 pm. He finished working at 1:59 pm. How can you figure out how long Steven worked in his garden?
 Sample answer: I need to find the difference between the start time and the end time.
- _____
- _____
- _____
- _____
- _____

- Part B**
 Draw a number line to represent how long Steven worked in the garden. Solve the problem. Explain your answer.
 Sample answer:
-
- $10 + 10 + 10 + 10 + 1 + 1$

Steven worked for 42 minutes in his garden. I drew a number line to count from the start time to the end time. I drew jumps of tens and ones. I wrote the number of minutes and added the minutes together.

WORK SPACE

7. Sandy woke up 15 minutes before midnight. She had a cup of hot chocolate and went back to sleep 30 minutes later. What time did Sandy wake up? What time did she go back to sleep? Use a.m. or p.m. for each time. Explain your answer.

Sample answer: Sandy woke up at 11:45 P.M. and went back to sleep at 12:15 A.M. Midnight is 12:00. Fifteen minutes before the hour is the same as 45 minutes after the previous hour. I count on 30 minutes from 11:45. 11:45 plus 15 minutes is midnight, or 12:00. 12:00 plus 15 minutes is 12:15. The times after noon and before midnight are written with P.M. The times after midnight and before noon are written with A.M. So, Sandy woke up at 11:45 P.M. and went back to sleep at 12:15 A.M.

EXIT TICKET

Now that you have mastered solving addition and subtraction problems with time, let's solve the problem in the Real-World Connection. Andy got home from school at 3:35 pm. It took him 10 minutes to eat a snack and 5 minutes to change clothes. Then, it took him 15 minutes to ride his bike back to school. At what time did he arrive at school for running practice?

4:05 P.M.

Sample answer: School is out at 3:35 P.M.

It takes him 30 minutes from when he leaves school to when he gets back to school:

10 minutes to snack + 5 minutes to change + 15 minutes to ride back = 30 minutes.

From 3:35 to 4:00 is 25 minutes, so Andy arrives 5 minutes after 4:00, or 4:05 P.M.



TEACHER NOTES

REAL-WORLD GOAL FOR STUDENTS

- Students will understand how to solve word problems involving time by using number lines and with addition and subtraction.

TIPS FOR THE STRUGGLING LEARNER

- Students may struggle with elapsed time that goes past the hour. It is helpful to think of how many minutes it is until the hour (establishing the ending-time hour) and then how much time is left, which will be the ending-time minute.
- Students may confuse a.m. and p.m., so brainstorming activities that students do in the a.m. and p.m. might help when remembering the distinction.
- Students may need to see the connection between a clock face and a round number line, which is more familiar to students.

TIPS FOR THE ENGLISH LANGUAGE LEARNER

- English learners may have difficulty saying the names of different times, such as 4:00 (four o'clock), 3:45 (three forty-five), and 5:05 (five oh five). Show several different times and have students speak the names of the times aloud. Try doing this at different times throughout the day.

ACTIVITIES FOR THE ADVANCED LEARNER

- Students can work out problems where the elapsed time is in hours and minutes, such as 3 hours, 15 minutes. These problems may include subtracting where regrouping is needed.
- Students can do problems where the start time is in the morning and the end time is in the afternoon, so that they need to pay attention to a.m. and p.m. as well as times that start at perhaps 11:15 and end at 1:25.