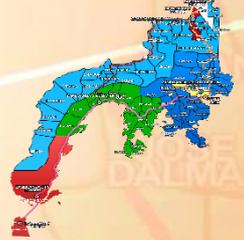




Republic of the Philippines  
**Department of Education**  
 Regional Office IX, Zamboanga Peninsula



- JANUARY**  
*Matuguhon*
- FEBRUARY**  
*Mahiguimaon*
- MARCH**  
*Matinabungen*
- APRIL**  
*Matinahuron*
- MAY**  
*Makapsay og Malimpyo*
- JUNE**  
*Maablik og Masunod sa  
Dhasaklong Oras*
- JULY**  
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- DECEMBER**  
*Maalampon*



Zest for **P**rogress  
 Zeal of **P**artnership

# Mathematics

## Quarter 3 – Module 5

### How I Use My Time



Name of Learner: \_\_\_\_\_

Grade & Section: \_\_\_\_\_

Name of School: \_\_\_\_\_



# What I Need to Know

This module is divided into three lessons:

- Lesson 1: Finding elapsed time in minutes and seconds
- Lesson 2: Estimating the duration of time in minutes
- Lesson 3: Solving problem involving elapsed time

After using this module, you are expected to:

1. Find elapsed time in minutes and seconds **M4ME-III f-11**
2. Estimate the duration of time in minutes **M4ME-III f-12**
3. Solve the problem involving elapsed time **M4ME-III g-13**



# What I Know

**Directions:** Choose the letter of the best answer. Write the chosen letter on your paper.

- 1) What is elapsed time?
  - A. The time when the activity starts
  - B. The time when the activity ends
  - C. The started time and the ended time
  - D. The length of time spent for an activity
- 2) Which statement is TRUE about finding the elapsed time?
  - A. Started time – Ended time = Elapsed time
  - B. Ended time – Started time = Elapsed time
  - C. Started time + Ended time = Elapsed time
  - D. Ended time × Started time = Elapsed time
- 3) Jessil started eating her dinner at 6:35 P.M. and finished at 7:08 P.M. How long did she eat her dinner?
  - A. 20 mins
  - B. 25 mins
  - C. 30 mins
  - D. 33 mins

- 4) How long will Mrs. Don's travel if she departed at Ipil Bus Terminal @ 10:02 A.M. and arrived at Buug Bus Terminal at 11:00 A.M.?
- A. 45 mins
  - B. 48 mins
  - C. 55 mins
  - D. 58 mins.
- 5) Last Saturday, Teacher Maribel had to do work at school. She started checking papers at 8:10 A. M. and then finished at 8:55 A. M. About how long did Teacher Maribel work?
- A. 20 minutes
  - B. 30 minutes
  - C. 40 minutes
  - D. 50 minutes
- 6) Saturday was such a lazy day that Shann decided to stay in bed and watch cartoons. She started watching cartoons at 5:44 A.M. until 12:55 P.M. About how long did Shann watch Saturday cartoons?
- A. 6 hours
  - B. 7 hours
  - C. 8 hours
  - D. 9 hours
- 7) What would be the estimated elapsed time if Mother Mely takes a walk from 6:03 A.M. to 6:54 A.M.?
- A. 30 minutes
  - B. 40 minutes
  - C. 50 minutes
  - D. 60 minutes.
- 8) What are the steps in solving word the problem involving elapsed time?
- A. Plan, Understand, Solve, Check and Look Back
  - B. Understand, Plan, Solve, Check and Look Back
  - C. Solve, Understand, Plan, Check and Look Back
  - D. Plan, Solve, Understand, Check and Look Back
- 9) Father Virgilio wakes up at 5:30 A.M. so that he will have time to feed chickens in his backyard. At 6:10 A.M., he is ready to go for church service. How long does it take him to feed the chickens? The problem asks you to find
- A. the started time he fed the chickens
  - B. the finished time feeding the chickens
  - C. the place to go after feeding the chickens
  - D. the length of time spent in feeding the chickens
10. What is the answer to problem number 9?
- A. 30 minutes
  - B. 35 minutes
  - C. 40 minutes
  - D. 45 minutes



## What's In

**A. Write AM or PM when expressing the time for the following activities.**

1. Eating breakfast \_\_\_\_\_
2. Having lunch \_\_\_\_\_
3. Attending the flag raising \_\_\_\_\_
4. 25 minutes before 6 in the morning \_\_\_\_\_
5. 9 minutes past 4 in the afternoon \_\_\_\_\_

**B. Convert minutes to seconds and vice versa, hours to minutes, and vice versa.**

1. 1 minute \_\_\_\_\_ seconds
2. 3 minutes \_\_\_\_\_ seconds
3. 60 seconds \_\_\_\_\_ minute
4. 1 hour \_\_\_\_\_ minutes
5. 60 minutes \_\_\_\_\_ hour

**C. The words below are scrambled, arrange the letters to form the steps used in solving the problem.**

- \_\_\_\_\_ 1. ELVOS
- \_\_\_\_\_ 2. NALP
- \_\_\_\_\_ 3. REDUNSDTAN
- \_\_\_\_\_ 4. KCHEC dan KOOL KCAB
- \_\_\_\_\_ 5. tawh si deksa?



## What's New

**Read and discover:**

**John Carlo is reading a book. He started at 4:10 P.M and finished at 4:55 P.M. How many minutes did he read?**

Who is reading a book? \_\_\_\_\_

What time did he start reading? \_\_\_\_\_

What time did he finish reading? \_\_\_\_\_

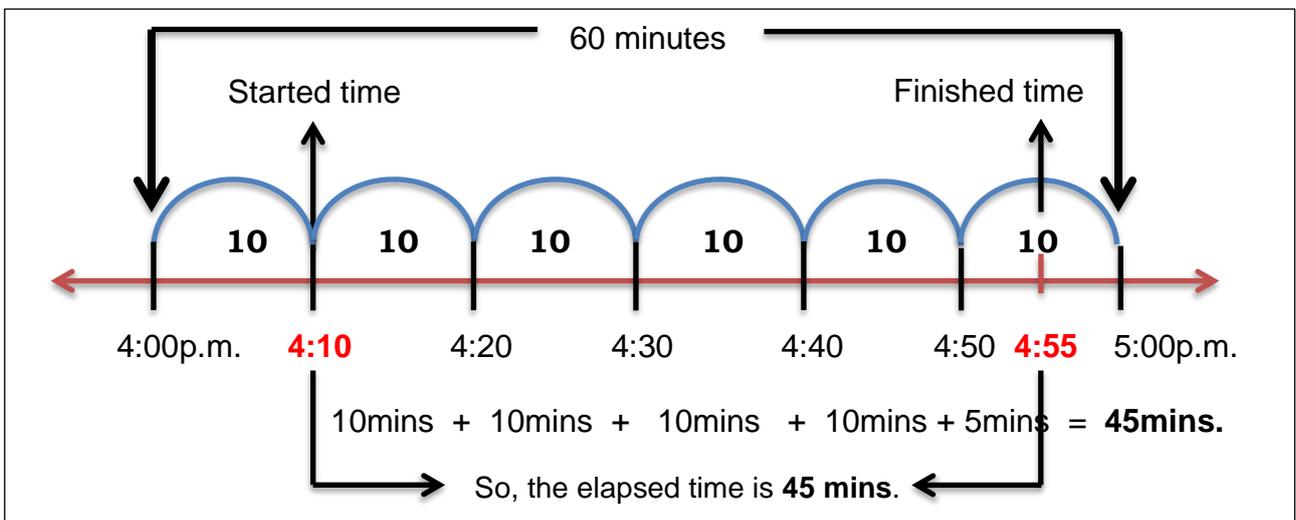
What does the problem ask you to find? \_\_\_\_\_



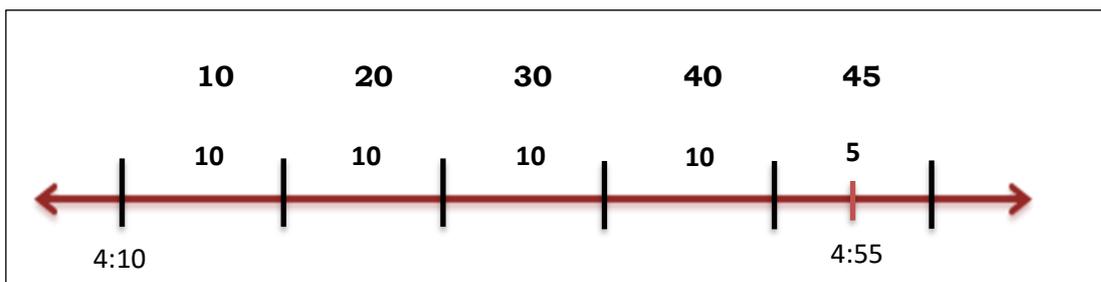
# What is it

- The problem asks you to **find the Elapsed time** of reading a book by John Carlo.
- An **elapsed time** is the length of time spent on an activity or event.
- There are two ways in solving the problem:

## A. BY USING NUMBER LINE



- Take a look at the number line, it represents 1 hour or 60 minutes where it is divided into six equal parts, each part is equivalent to **10 minutes** and if you are going to count all 10s in the number line that makes 60 minutes in all, half of the part is **5 minutes**.
- If John Carlo is reading a book at **4:10 p.m.**, start counting the part from **4:10** to **4:55**, so



- The length of time that John Carlo spent reading a book is **45 mins**.
- Thus, you are going to add **10 + 10 + 10 + 10 + 5 = 45 minutes** is the **elapsed time**.

**B. BY COMPUTATION**

- Let's subtract the time he started reading from the time he finished reading.

$$\text{Time finished} - \text{Time started} = \text{Elapsed Time}$$

$$4:55 \quad - \quad 4:10 \quad = \quad \underline{\hspace{2cm}}$$

- Write this way. Align the numbers in the column of Minutes and Hours.

	<b>Hours : Minutes</b>
Time Ended	4 : 55
Time Started	- 4 : 10
	<u>0 : 45</u>

The elapsed time is **45 minutes**.

- Take a look at this example.

	H M	
	5 75	
Time ended	<del>6:15</del> →	5:75
Time started	- <u>5:25</u> →	<u>- 5:25</u>
		<u>0: 50</u>

- You have noticed that the minutes in Time started is greater, you cannot subtract 25 from 15, so you need to borrow 1 hour and rename 1 hour as 60 minutes. Add 60mins and 15mins that makes 75mins. In other words, you regroup the time ended from 6:15 to 5:75. Then you can do the subtraction process. So, the elapsed time is **50 minutes**.

- Look at the table below.

Start Time	End Time	Elapsed Time
0 : 08 : 05	0 : 08 : 45	

	<b>Hours : Minutes : Seconds</b>
Time Ended	0 : 08 : 45
Time Started	- 0 : 08 : 05
	<u>0 : 00 : 40</u>

Elapsed time is **40 seconds**.

- To make computation easier, let us **ESTIMATE the actual time**. Round off the time in minutes to its nearest minute, then subtract the rounded times. Look at the table below

Actual time		Estimated time	
<b>3:57</b>	<b>rounded to</b> →	<b>3:60</b>	
<b>-3:13</b>	<b>rounded to</b> →	<b>-3:10</b>	
<b>0:44</b>		<b>0:50</b>	

- To **estimate** 3:57 and 3:13, we rounded them to the nearest minute. Round 3 hours and 57 minutes to 3 hours and 60 minutes. Round 3 hours and 13 minutes to 3 hours and 10 minutes. Now it is very easy for you to find the elapsed time because numbers now are ending zero.
- There are 50 minutes when you subtract 3:60 and 3:10. So, they went shopping for about **50 minutes**. This is the **estimated elapsed time**.
- Another example of estimated elapsed time, when you round off 4 hours and 35 minutes, it will become 5 hours. BUT if you round off 4 hours and 25 minutes, it remains 4 hours. Always remember that 1 hour is equivalent to 60 minutes, more than 30 minutes is counted as 1 hour.

4 hrs 35 mins rounded to → 5 hrs

**4 hrs 28 mins** rounded to → **4 hrs**

**Khian, Josh, and Rika went to the park to play. They started playing at 3:13 P.M. They went home at around 3:57 P.M. About how many minutes did they play?**

What are the kids love doing? \_\_\_\_\_

At what time did they start and end playing? \_\_\_\_\_

What is asked in the problem? \_\_\_\_\_

How will you solve the problem? \_\_\_\_\_

- To **solve a word problem involving elapsed time**, there are steps that you will follow:



Steps	Answer
<b>Understand</b>	
1. What is asked in the problem?	The amount of time the kids are playing.
2. What are the given facts?	3:13 P.M. (Time started) 3:57 P.M. (Time ended )
<b>Plan</b>	
3. What operation will you use?	Subtraction
4. What is the number sentence?	$3:57 - 3:13 = N$ (Time ended - Time started=N)
<b>Solve</b>	
5. How is the solution done?	$\begin{array}{r} 3:57 \\ - 3:13 \\ \hline 0:44 \end{array}$
<b>Check and Lookback</b>	
6. What will you do to check your answer?	Add the difference to the subtrahend $\begin{array}{r} 3:13 \\ 0:44 \\ \hline 3:57 \end{array}$
7. What is the answer to the problem?	Kids spent <b>44 minutes</b> playing in the park.

- Always remember in solving the problem to follow the steps.
- Note down the time the activity/event started and the time it finished.



## What's More

**A. Match column A with the elapsed time in column B.**

	Column A		Column B
	Start Time	End Time	Elapsed Time
_____ 1.	0 : 03 : 04	0 : 03 : 56	A. 30 seconds
_____ 2.	0 : 06 : 10	0 : 06 : 40	B. 54 minutes
_____ 3.	10 : 01 a.m.	10 : 55 a.m.	C. 26 minutes
_____ 4.	12 : 25 p.m.	12 : 51 p.m.	D. 52 seconds
_____ 5.	3 : 25 a.m.	4 : 05 a.m.	E. 40 minutes

**B. Find the estimated and elapsed times in each situation below.**

1. The Diaz family arrived in Zamboanga City at 10:28 in the morning. They left their house at 10:00 A.M.  
Actual elapsed time \_\_\_\_\_ Estimated elapsed time \_\_\_\_\_
2. Section A of the Grade 4 Class of Buug Central SPED Center started their tour around the Poblacion at 8:06 A.M. they went back to school at 8:58 A.M.  
Actual elapsed time \_\_\_\_\_ Estimated elapsed time \_\_\_\_\_
3. Irish started eating her dinner at 6:35 P.M. and finished eating at 7:03 P.M.  
Actual elapsed time \_\_\_\_\_ Estimated elapsed time \_\_\_\_\_
4. Rex was called to the Principal's office at 3:22 P.M. he came back to his room at 3:45 P.M.  
Actual elapsed time \_\_\_\_\_ Estimated elapsed time \_\_\_\_\_
5. Jhuleanne and Ysabelle started working on their project in MAPEH at 5:30. They finished their project at 6:12 P.M.  
Actual elapsed time \_\_\_\_\_ Estimated elapsed time \_\_\_\_\_

**C. Read the problem, then Match Column A with the answer in Column B.**

Mother prepared ingredients for baking some cake. She started to cook in the oven at 2:15 P.M. and was fully baked at 2:55 P.M. About how many minutes did mother bake the cake?

**Column A**

1. What is asked in the problem?
2. What are the given facts?
3. What operation to be used?
4. What is the number sentence?
5. What is the answer to the problem?

**Column B**

- A. 40 minutes
- B. 2:55 A.M. , 2:15 A.M.
- C. Subtraction
- D.  $2:55 - 2:15 = N$
- E. The length of time it takes  
Mother to bake the cake



# What I Have Learned

**A. Fill in the blanks to complete the statement. Choose your answer in the box.**

elapsed time	start	end
number line	computation	

An \_\_\_\_\_ is the length of time spent for an activity or event. There are two ways to find the elapsed time, using \_\_\_\_\_ and by \_\_\_\_\_. To compute the elapsed time, subtract \_\_\_\_\_ time from \_\_\_\_\_ time.

**B. Estimate the elapsed time**

$\begin{array}{r} \text{6:48} \\ - \text{6:16} \\ \hline \end{array}$	$\longrightarrow$	_____
	$\longrightarrow$	_____

**C. Fill in the blanks with the correct word that best complete the sentence.**

- To solve a word problem involving elapsed time, we follow the steps in solving word problems:
- Step 1 \_\_\_\_\_ the problem by asking these questions
    - ❖ What is asked?
    - ❖ What are given facts?
  - Step 2 \_\_\_\_\_ what to do
    - ❖ What operation to be used?
    - ❖ What is the number sentence?
  - Step 3 \_\_\_\_\_ the problem
    - ❖ How is the solution done?
  - Step 4 \_\_\_\_\_ your answer
    - ❖ What will you do to check if your answer is correct?
    - ❖ \_\_\_\_\_ Minuend and elapsed time
    - ❖ What is your answer



# What I Can Do

**A. Directions:** Find the elapsed time shown in the table for each activity. Write the letter of the correct answer in your paper.

FRIENDLY AIRLINES SCHEDULES			
Departure/From (Start time)		Arrival/To (End Time)	
Manila	7:05 A.M.	Pagadian City	7:55 A.M.
Pagadian City	9:05 A.M.	Manila	9:55 A.M.
Cebu City	3:35 P.M.	Pagadian City	4:20 P.M.
Pagadian City	2:45 P.M.	Cebu City	3:30 P.M.
Manila	5:05 P.M.	Cagayan de Oro City	6:55 P.M.

- How long is the flight from Manila to Pagadian City?  
A. 30 mins.                      C. 45 mins.  
B. 35 mins.                      D. 50 mins.
- Mr. Lu will go home to Pagadian City from Cebu City, how long will his flight be?  
A. 25 mins.                      C. 45 mins.  
B. 35 mins.                      D. 55 mins.
- How many minutes is the flight from Pagadian City to Cebu City?  
A. 40 mins.                      C. 50 mins.  
B. 45 mins.                      D. 55 mins.
- How long will a group of tourists travel from Manila to Cagayan de Oro City?  
A. 1 hour and 40 mins.                      C. 1 hour and 50 mins.  
B. 1 hour and 45 mins.                      D. 1 hour and 55 mins.
- How long will Sam's flight be if she goes back to Manila from Pagadian City?  
A. 40 mins.                      C. 50 mins.  
B. 45 mins.                      D. 55 mins.

**B. Directions:** Estimate the time in minutes spent doing different activities.

Activity	Time started	Time ended	Estimated time duration
Taking a bath	5:15 A.M.	5:26 A.M.	
Cooking breakfast	5:30 A.M.	6:13 A.M.	
Washing dishes	6:45 A.M.	7:00 A.M.	
Riding a tricycle	7:25 A.M.	7:57 A.M.	
Cleaning the classroom	8:05 A.M.	8:46 A.M.	

**C. Directions:** Read and solve the word problem involving elapsed time. Write your answer in your paper.

Yumi is answering her Summative Test for 40 minutes. If she started at 9:20 A.M., at what time will she finish the test?

1. What is asked? \_\_\_\_\_
2. What are given? \_\_\_\_\_
3. What operation will you use? \_\_\_\_\_
4. What is the number sentence? \_\_\_\_\_
5. What is the answer? \_\_\_\_\_



## Assessment

**Directions:** Choose the letter of the best answer. Write the chosen letter in your paper.

1. What is the length of time spent for an activity called?  
  
A. Ended time  
B. Started time  
C. Elapsed time  
D. Estimated time
  
2. Which statement is TRUE about finding elapsed time?  
  
A. Started time – Ended time = Elapsed time  
B. Ended time – Started time = Elapsed time  
C. Started time + Ended time = Elapsed time  
D. Ended time × Started time = Elapsed time
  
3. Write down the time shown by the two clocks, then find the elapsed time.

Start time



\_\_\_\_\_

End Time



\_\_\_\_\_

Elapsed Time

\_\_\_\_\_

- A. 15 mins
- B. 20 mins
- C. 25 mins
- D. 30 mins

4. Use the clock to answer the question. The clock tells the time now. Sam takes a nap for 25 minutes from now, at what time will she wake up?



- A. 7:25  
B. 8:25  
C. 8:45  
D. 9:45
5. Last Saturday, Teacher Maribel had to do work at school. She started checking papers at 8:10 A. M. and then finished at 8:55 A. M. About how long did Teacher Maribel work?
- A. 20 minutes  
B. 30 minutes  
C. 40 minutes  
D. 50 minutes
6. Saturday was such a lazy day that Shann decided to stay in bed and watch cartoons. She started watching cartoons at 5:44 A.M. until 2:55 P.M. About how long did Shann watch Saturday cartoons?
- A. 7 hours  
B. 8 hours  
C. 9 hours  
D. 10 hours
7. After assignments, Yumi's mother gave her a break to ride her new bicycle. She started riding at 3:01 P.M. and finished at 3:56 P.M. how long did she ride her bicycle?
- A. 40 minutes  
B. 45 minutes  
C. 50 minutes  
D. 55 minutes
8. What are the steps in solving word problem involving elapsed time?
- A. Plan, Understand, Solve, Check and Look Back  
B. Understand, Plan, Solve, Check and Look Back  
C. Solve, Understand, Plan, Check and Look Back  
D. Plan, Solve, Understand, Check and Look Back
9. Father Virgilio wakes up at 5:30 A.M. so that he will have time to feed chickens in his backyard. At 6:10 A.M., he is ready to go for church service. How long does it take him to feed the chickens? The problem asks you to find
- A. the started time he fed the chickens  
B. the finished time feeding the chickens  
C. the place to go after feeding the chickens  
D. the length of time spent in feeding the chickens

10. What is the answer to problem number 9?

- A. 30 minutes
- B. 35 minutes
- C. 40 minutes
- D. 45 minutes



## Additional Activities

A. Write down the time shown by the clocks, then find the elapsed time.

	Start time	End time	Elapsed time
1.			_____
2.			_____
3.			_____

B. Draw lines to connect times that have an estimated time of 40 minutes. One is done for you.

5:05 P.M.	6:40 P.M.	7:58 P.M.	
6:05 P.M.	12:24 P.M.	3:46 P.M.	7:22 P.M.
4:30 P.M.	12:59 P.M.	3:05 P.M.	

### C. Match Column A with Column B.

The Grade 4 pupils of Mrs. Emylene took their lunch after their classes at 11:45 A.M. If they finished eating at 12:30 P.M. , how long did they take their lunch?

#### Column A

1. What is asked?
2. What are the given facts?
3. What operation is needed?
4. What is the number sentence?
5. What is the answer?

#### Column B

- A. 11:45 A.M. ,12:30 P.M.
- B. Subtraction
- C.  $12:30 - 11:30 = N$
- D. 55 minutes
- E. the length of time spent in eating their lunch

## References

Chingcuangco, Ofelia G., M.A. Ed *Soaring High with Mathematics 4*.edited by Fedirico C. Castillo,Ed.dQuezon City: Saint Matthews Publishing, 2019.

Chingcuangco, Ofelia G., M.A. Ed *Soaring High with Mathematics 4 Teachers Manual*.edited by Fedirico C. Castillo,Ed.dQuezon City: Saint Matthews Publishing, 2019.

Tabilang, Alma R.,Ian Jay B. Arce, Rodrigo V. Pascua, Nelma P. Calayag, et al., *Mathematics 4 Learner's Material*. edited by Mary Jeanne B. Aldeguer. Pasig:Departmentof Education, 2015

Tabilang, Alma R.,Ian Jay B. Arce, Rodrigo V. Pascua, Nelma P. Calayag, et al., *Mathematics 4 Teachers Guide*. edited by Mary Jeanne B. Aldeguer. Pasig:Departmentof Education, 2015

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