JANUARY
Makugihon

FEBRUARY
Mahigugmaon

MARCH
Matinabangon

APRIL
Matinahuron

MAY
Mahapsay og Malinigyo

JUNE
Maabtik og Masunod sa Ohsaktong Oras

JULY
Maantigo og Maabilidad

AUGUST
Maginhunahunaon para sa Uban

SEPTEMBER
Madaginoton

OCTOBER
Matinud-anon

NOVEMBER
Masaligan

DECEMBER
Maalampuon

Republic of the Philippines

Department of Education

Regional Office IX, Zamboanga Peninsula

4

Zest for Progress
Zeal of Partnership

MATHEMATICS

2ND QUARTER – Module 6:

ADDITION & SUBTRACTION OF FRACTIONS

Name of Learner: _____

Grade & Section: _____

Name of School: _____

Grade 4
Alternative Delivery Mode
Quarter 2 - Module 6: ADDITION & SUBTRACTION OF FRACTIONS

First Edition, 2020 aaaa

WHAT I NEED TO KNOW

After surpassingly doing the activities of this module, you are expected to **perform addition and subtraction of similar and dissimilar fractions** .
(M4NS-IIg-83) **and solve routine and non - routine problems involving addition and/ or subtraction of fractions.** (M4NS-IIh-87.1)

The goal in Mathematics education is to help and provide your learning experiences that will encourage you to expect and achieve more in this area. The activities of this module are written to further improve your critical thinking, in analyzing and solving problems by following the steps on solving word problems to help you comprehend and understand the problem better.

These acquired skills would soon make a difference in your learning which is essential in your development towards becoming young responsible citizens.

So, find time to study this module and let's build a responsible mathematical community amidst COVID-19 pandemic, it's all depends on you.

We are with you every step of the way. Good luck, stay safe and God bless.

WHAT'S IN

Activity 1. What is the word? Add or subtract the fractions. Write the letter of the fraction at the top box of each correct sum or difference inside the box. Answers are in the lowest term.

N. $\frac{3}{16}+\frac{3}{4}=n$ J. $\frac{8}{12}-\frac{1}{3}=n$ O. $\frac{10}{15}-\frac{2}{5}=n$ E . $\frac{1}{4}+\frac{3}{12}=n$ Y. $\frac{6}{10}-\frac{2}{5}$

$\frac{1}{2}$	$\frac{15}{16}$	$\frac{1}{3}$	$\frac{4}{15}$	$\frac{1}{5}$

1.   2.   3.   4.   5.

WHAT'S A NEW

Activity 2. Read the problem inside the box and then provide an answer to the questions below.

> **Sheryl bought $\frac{16}{24}$ kilogram of dalandan. She gave $\frac{1}{4}$ kilogram of it to her brother and $\frac{3}{12}$ kilogram to her friend. How many kilograms of dalandan were left?**

a. What is asked in the problem
b. What are the given facts?
c. What is/are word clue/s used to determine what operation to use?
d. What is/are the number sentence?

WHAT IS IT

How can we solve the given problem? Here are the steps to follow so you can easily understand the problem.

Step 1. Know what is asked in the problem or the hidden question in the problem? Here you focused on the questions in the given problem.

Step 2. What is/are given facts? List all the given numbers in the problem.

Step 3. What operation/s to use or word clue/s? Decide what operation/s.
Addition, subtraction, or a combination of both.

Step 4. Write the mathematical sentence or number sentence.

Step 5. Solve the Problem.

Example 1 : Let us answer activity 2.

Step 1. Know what is asked in the problem.
⟶ The total number of kilograms of dalandan that were left.
Know what is the hidden question.
⟶ The total number of kilograms of dalandan Sheryl shared to her brother and friend.

Step 2. What is/are given facts?
⟶ $\frac{16}{24}$ kilogram of dalandan, $\frac{1}{4}$ kilogram of dalandan gave to her brother, $\frac{3}{12}$ kilogram of dalandan gave to her friend

Step 3. What is/are word clue/s used to determine what operation to use?
⟶ and –addition , left-subtraction

Step 4. Write the mathematical sentence or number sentence.
⟶ $\frac{16}{24} - \left\{\frac{1}{4} + \frac{3}{12}\right\} = n$

Step 5. Solve the Problem.

⟶

➡ Change $\frac{1}{4}$ and $\frac{3}{12}$ to similar fractions by finding

$$\frac{1}{4} = \frac{3}{12}$$

the Least Common Denominator (LCD)

$+$

➡ Divide the LCD by the denominator. Multiply

$$\frac{3}{12} = \frac{3}{12}$$

the quotient and the numerator. Write the product as

the new numerator.

$\frac{6}{12}$ or $\left(\dfrac{1}{2}\right)$ Add the numerators. Reduce to lowest term if possible.

$$\frac{16}{24} = \frac{16}{24}$$

➡ Change $\frac{16}{24}$ and $\frac{1}{2}$ to similar fractions by finding

$$-\frac{1}{2} = \frac{12}{24}$$

$$\frac{4}{24} \text{ or } \boxed{\frac{1}{6}}$$

the Least Common Denominator (LCD)

➡ Divide the LCD by the denominator. Multiply the quotient and the numerator. Write the product as the new numerator

➡ Subtract the numerators. Reduce to lowest term if possible.

Example 2.

> **Carlo answered $\frac{2}{8}$ of his homework in the morning and $\frac{3}{8}$ in the afternoon. What part of his homework was finished.**

Step 1. Know what is asked in the problem.
→ The part of Carlo's homework was finished.

Step 2. What is/are given facts?
→ $\frac{2}{8}$ answered homework in the morning, $\frac{3}{8}$ answered homework in the afternoon

Step 3. What is/are word clue/s used to determine what operation to use?
→ and-addition

Step 4. Write the mathematical sentence or number sentence
→ $\frac{2}{8} + \frac{3}{8} = n$

Step 5. Solve the Problem.

→
$$\begin{array}{r} \frac{2}{8} \\ + \frac{3}{8} \\ \hline \boxed{\frac{5}{8}} \end{array}$$

➡ Add the numerators. Place the sum over the same denominator. Add the whole number / numbers

➡ Reduce the answer to lowest term or rename it to mixed number.

Example 3.

> **Gina has $1\frac{4}{10}$ cups of flour . Her friend, Marleen , ask for $\frac{2}{10}$ cup of flour. How much flour was left with Gina?**

Step 1. Know what is asked in the problem.
→ The total number of flour left with Gina.

Step 2. What is/are given facts?
→ $1\frac{4}{10}$ cups of flour, $\frac{2}{10}$ cup of flour

Step 3. What is/are word clue/s used to determine what operation to use?
→ left-subtraction

Step 4. Write the mathematical sentence or number sentence

$$\longrightarrow \quad 1\frac{4}{10} - \frac{2}{10} = n$$

Step 5. Solve the Problem.

$$\longrightarrow \quad 1\frac{4}{10}$$
$$-$$
$$\frac{2}{10}$$
$$\overline{\quad\quad}$$
$$1\frac{2}{10} \text{ or } \quad \boxed{1}$$

Subtract the numerators. Place the difference over the same denominator.
Subtract the whole number / numbers.
Reduce the answer to lowest term or rename it to mixed number.

WHAT'S MORE

Activity 3. Read and analyze the problem then answer the questions below.

1.

An airline agent checked in 10 and $\frac{1}{3}$ kilograms of baggage for one passenger and another 8 and $\frac{5}{6}$ kilograms of baggage for his travel companion. How many kilograms of luggage did the agent check in all?

a. What is asked in the problem?
b. What is/are word clue/s used to determine what operation to use?
c. Solve the Problem.

2.

A recipe needs $\frac{3}{4}$ teaspoon black pepper and $\frac{1}{4}$ red pepper. How much more black pepper is needed than red pepper for this recipe?

a. What is/are given facts?
b. Write the mathematical sentence or number sentence **?**
c. Solve the Problem.

WHAT I CAN DO

Activity 4. Using the information below, create a problem on addition and subtraction of fraction, then solve the problem that you have been created.

> **Addition**: $\frac{1}{4}$ kilogram of petchay, $\frac{1}{2}$ kilogram of pork meat
>
> **Subtraction**: five-sixths of a bag of soil, $2\frac{1}{3}$ bags of soil

Multiple Choice: A.Read the problem carefully. Write the letter of the correct answer in your activity notebook.

1. Johnny and Eli were playing a video game and trying to get all of the treasure boxes. Johnny got $2\frac{1}{3}$ treasure boxes. Eli got $1\frac{5}{9}$ treasure boxes. Together, Johnny and Eli got how many treasure boxes?

    A. $3\frac{8}{9}$ B. $2\frac{5}{8}$ C. $3\frac{2}{5}$ D. $\frac{6}{8}$

2. Two lions, Fluffy and Fireball, met at the zoo. Fluffy's tail is $\frac{3}{4}$ of a meter long. Fireball's tail is $\frac{5}{8}$ of a meter long. How much longer is Fluffy's tail than Fireball's tail?

    A. $\frac{5}{8}$ B. $\frac{3}{9}$ C. $\frac{1}{8}$ D. $\frac{1}{6}$

3. .Some boys went hiking. They have to walk $5\frac{3}{4}$ kilometers. After walking 2 ¼ kilometers they stop and rest. How many kilometers do they still have to walk?

    A. $3\frac{1}{3}$ B. $3\frac{4}{5}$ C. $3\frac{1}{2}$ D. $2\frac{3}{4}$

4. Rachel rode her bike for one-fifth of a mile on Monday and two-fifths of a mile on Tuesday. How many miles did she ride altogether?

    A. $\frac{3}{8}$ B. $\frac{3}{5}$ C. $\frac{2}{3}$ D. $\frac{4}{9}$

5. Sia has $\frac{1}{4}$ meter of ribbon. Jenny has $\frac{3}{8}$ meter of ribbon. How many meters of ribbon does the two have?

    A. $\frac{5}{8}$ B. $\frac{1}{5}$ C. $\frac{2}{9}$ D. $\frac{3}{5}$

B.Complete each table. Write the answer in lowest terms if applicable in the third row.

ADD $\frac{1}{3}$

$\frac{2}{3}$	$1\frac{4}{6}$	$\frac{1}{3}$	$2\frac{2}{9}$
$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$	$\frac{1}{3}$

SUBTRACT $\frac{1}{4}$

$\frac{2}{4}$	$\frac{4}{8}$	$2\frac{3}{12}$	$\frac{6}{4}$
$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$	$\frac{1}{4}$

References:

Chingchuaco, Ofelia. *Soaring High with Math Grade 4 (Textbook and Manual)*.Philippines: Saint Matthew's Publishing, 2019.

Coronel, Carmelita., etc. *Mathematics for a Better Life* Philippines: FSD, INC., 2010.

Tabilang, Alma., etc. *Mathematics 4.* Philippines: LEXICON PRESS, INC., 2015.

ANSWER KEY

Multiple choice:
1. A
2. C
3. A
4. D
5. A

ACTIVITY 1

E N J O Y
1. 2. 3. 4. 5.

ACTIVITY 2

a. The total number of kilograms of dalandan that were left.

b. $\frac{16}{24}$ kilogram , $\frac{1}{4}$ kilogram , $\frac{3}{12}$ kilogram

c. and –addition, left-subtraction

d. $\frac{16}{24} - \left[\frac{1}{4} + \frac{3}{12}\right] = n$

ACTIVITY 3

1. a. The total number of kilograms of luggage of the airline agent.

b. and -addition

c. $19\frac{1}{6}$ kilograms

2. a. $\frac{3}{4}$ teaspoon black paper , $\frac{1}{4}$ red pepper

b. $\frac{3}{4} - \frac{1}{4} = n$

c. $\frac{1}{2}$ kilograms

ASSESSMENT

A.
1. A
2. B
3. C
4. B
5. A

B. Add

1	2	$\frac{2}{3}$	$2\frac{5}{9}$

B. Subtract

$\frac{1}{4}$	$\frac{1}{4}$	2	$1\frac{1}{4}$