JANUARY
Makugihon
FEBRUARY
Mahigugmaon
MARCH
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APRIL
Matinahuron
MAY
Mahapsay og Malimpyo
JUNE
Maabtik og Musunod sa Oksultong Oras
JULY
Maantigo og Maabilidad
AUGUST
Maginhunahunaon para sa Uban
SEPTEMBER
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OCTOBER
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NOVEMBER
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DECEMBER
Maalampuon

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4

MATHEMATICS

2ND QUARTER – Module 5:

VISUALIZING ADDITION & SUBTRACTION OF FRACTIONS

Name of Learner: _____

Grade & Section: _____

Name of School: _____

Grade 4
Alternative Delivery Mode
Quarter 2 - Module 5: VISUALIZING ADDITION & SUBTRACTION OF FRACTIONS

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What I Need to Know (Alamin)

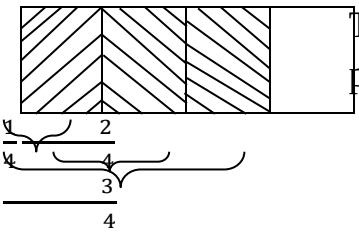
In this module, you will learn about Visualizing Addition and Subtraction of Similar and Dissimilar Fractions and Visualizing Subtraction of a fraction from a whole number (M4NS-IIf-82.2). You will be able to enjoy visualizing fractions in this lesson. Illustrations used to represent each fraction are made understandable and easy.

Study the Illustration of the Problem.

A. 

The boys painted $\frac{1}{4}$ of the wall. The girls painted $\frac{2}{4}$ more. What part of the whole wall did the children finish painting altogether? Find: $\frac{1}{4} + \frac{2}{4}$

Let us draw a model.



The region represents the wall.Three of four equal parts ofthe region are shaded

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

So, $\frac{1}{4} + \frac{2}{4} = \frac{3}{4}$.

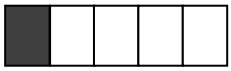
Answer: The children finished painting $\frac{3}{4}$ of the wall.

Lito has a piece of bamboo $\frac{4}{5}$ m long. From this, he cut a piece of $\frac{1}{5}$ m long. How long is the remaining piece?

Find: $\frac{4}{5} - \frac{1}{5}$

Let us use two unit regions to show subtraction or similar fractions.

$\frac{4}{5}$  re shaded. One part is deleted.

$\frac{1}{5}$ 

Three parts is deleted. Three parts are left. So, $\frac{4}{5} - \frac{1}{5} = \frac{3}{5}$

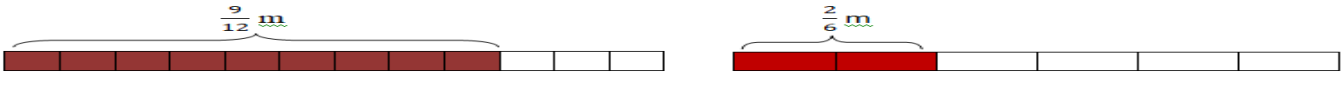
Answer: The remaining piece is $\frac{3}{5}$ m long.

B. Now, let us try to visualize addition and subtraction of dissimilar fractions.

Read the problem.

Ford had $\frac{9}{12}$meter of wood for his picture frame. His father gave him $\frac{2}{6}$meter more. How many meters of wood does he have now?

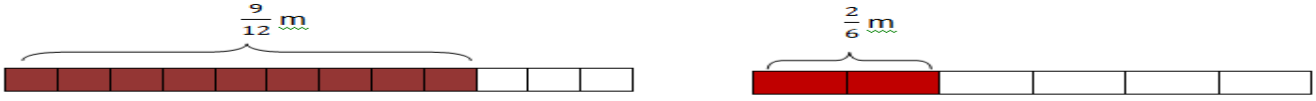
You can solve the problem by using a diagram or illustration.



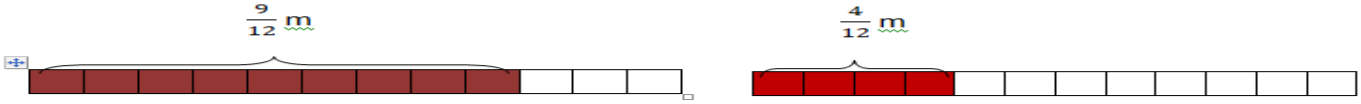
$\frac{9}{12} + \frac{2}{6} = \square$

$\frac{9}{12}$and $\frac{2}{6}$are dissimilar fractions.

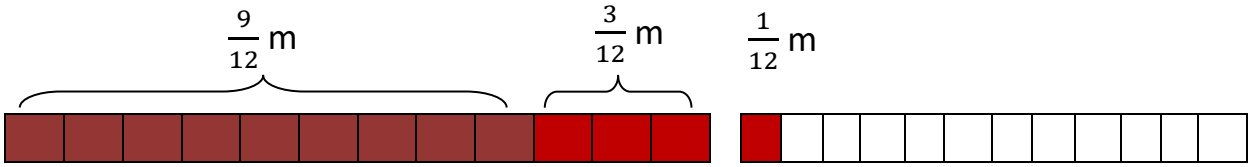
They have to be changed to similar fractions so they can be added.



Rename as similar fractions



Rename as similar fractions
Add the similar fractions.

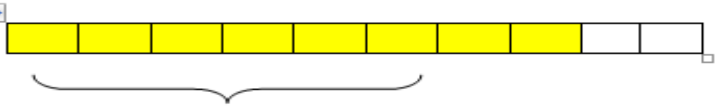


$$\frac{9}{12}+\frac{4}{12}=\frac{13}{12}=1\frac{1}{12}$$

Another way is to use the least common denominator (LCD).
The LCD of 6 and 12 is 12.

So: $\frac{9}{12}=\frac{9}{12}\frac{9}{12}+\frac{2}{6}$

$\frac{2}{6}=\frac{4}{12}$

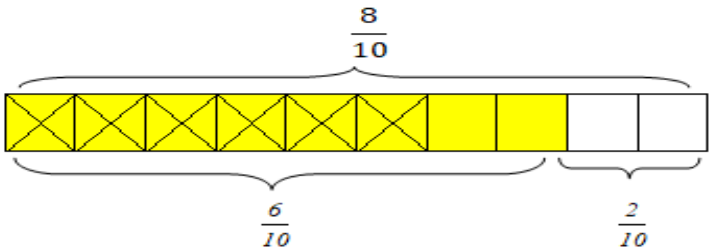
$\frac{9}{12}+$  $\frac{4}{12}=\frac{13}{12}=1\frac{1}{12}$

So, Ford has $1\frac{1}{12}$ meters of wood now

Another Example:

$\frac{8}{10}-\frac{3}{5}=\square$ $\frac{8}{10}$

$\frac{3}{5}=\frac{6}{10}$



So, $\frac{8}{10}-\frac{6}{10}=\frac{2}{10}=\frac{1}{5}$

C. Raphael has a whole banana cake. He sliced it into 8 equal parts. He gave 4 parts to his brother. What part of the cake was left to him?



To solve the problem:Rewrite 1 whole as $\frac{8}{8}$

$\mathbf{1}=\frac{\mathbf{8}}{\mathbf{8}}\frac{8}{8}$ - $\frac{4}{8}=\frac{4}{8}$

When we change $\frac{\mathbf{4}}{\mathbf{8}}$ to lowest term, we will get $\frac{1}{2}$

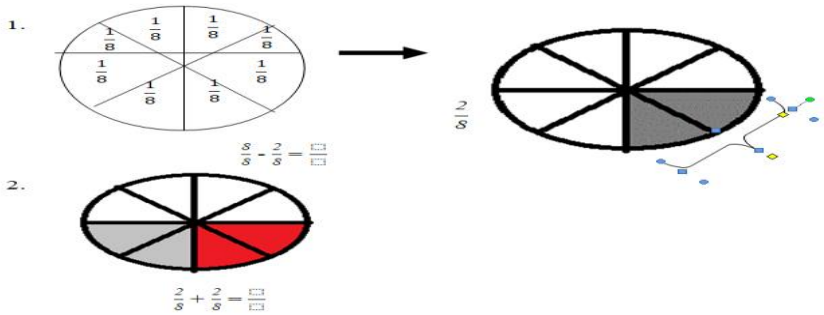
Thus, $\frac{\mathbf{1}}{\mathbf{2}}$ of the cake was left to Raphael.

Lesson

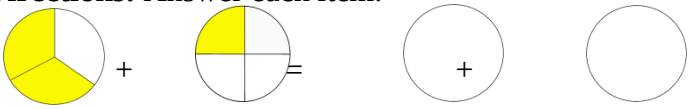
Visualizing Addition and Subtraction of Similar and Dissimilar Fractions
Visualizing Subtraction of a Fraction from a Whole Number

What's In (Balikan)

A. Josephine and her mother bought a cake near Sto. Niño Church. They divided the cake into eight equal parts. They ate $\frac{2}{8}$ and brought home the rest. What part of the cake did they bring home?



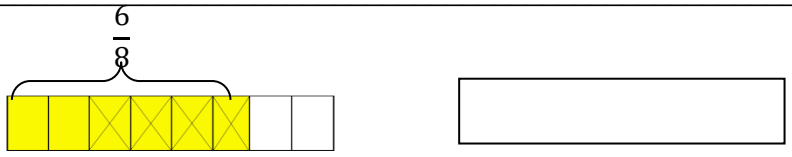
B. **Directions:** Answer each item.

1. 

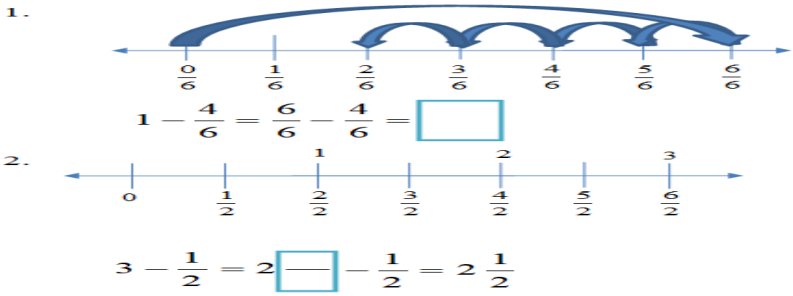
$\frac{2}{3}$ + $\frac{1}{4}$ $\frac{8}{12}$ + $\frac{3}{12}$

dissimilar similar

=



C.



What's New (Tuklasin)

A. Find the sum or difference and express your answer in lowest term if possible.

1.

$\frac{3}{4} - \frac{2}{4} = \frac{\square}{\square}$

2.

$\frac{2}{6} + \frac{2}{6} = \frac{\square}{\square}$

B. Illustrate by using rectangular regions, then solve.

1.) $\frac{3}{4} + \frac{1}{3}$ 2.) $\frac{2}{3} - \frac{2}{5}$

C. Study the illustration and answer the following exercises.

1. 

$1-\frac{2}{8}$

$\frac{8}{8} - \frac{2}{8} =$ _____

2. 

$1-\frac{3}{9}$

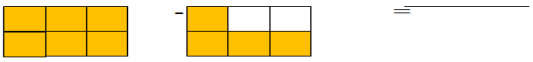
$\frac{9}{9} - \frac{3}{9} =$ _____

What is It (Suriin)

A. Find the sum or difference. Shade using crayons to show the answer.

1. 

$\frac{2}{8} + \frac{4}{8} =$

2. 

$\frac{6}{6} - \frac{4}{6} =$

1.) $\frac{5}{8}$ + $\frac{1}{4}$ = 2.) $\frac{7}{9}$ - $\frac{1}{3}$ =

C. Find the difference. Use regions or number lines to show your answer.

1. $3 - \frac{2}{3}$ = 2. $4 - \frac{4}{7}$ =

What's More (Pagymanin)

A. Use models to represent the operation used in the following fractions.

1. $\frac{2}{9} + \frac{1}{9} =$ 2. $\frac{8}{10} - \frac{4}{10} =$

B. Draw a model to show each sum or difference.

1. $\frac{3}{8}$ + $\frac{3}{4}$ = 2. $\frac{7}{9}$ - $\frac{2}{3}$ =

C. Directions: Draw a region to show or visualize subtraction of a fraction from a whole number.

Example: $3 - \frac{5}{6}$ =

1. $4 - \frac{3}{5}$ =

2. $2 - \frac{2}{3}$ =

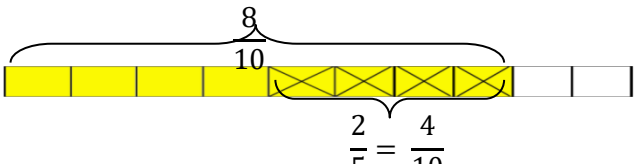
What I Can Do (Isagawa)

A. **Find the sum or difference and express your answer in lowest term if possible.**

1. $\frac{3}{7} + \frac{1}{7} =$ _____ 2. $\frac{4}{15} - \frac{1}{15} =$ _____

B. Write the fraction form by the shaded parts in the illustration. Then, draw the equivalent similar fraction and get the sum.

1.  = _____

2. 

= _____

C. Direction: Find the difference. Write your best answer on your notebook.

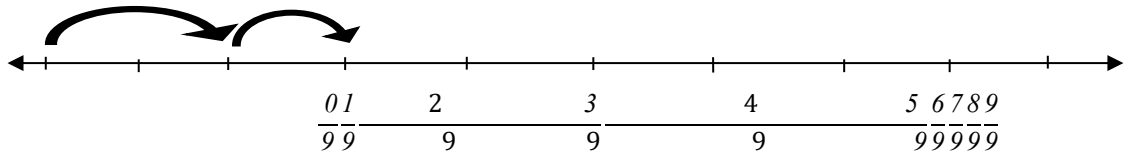
1. Aunt Lucy divided a cassava cake into 16 equal parts. Her visitors ate $\frac{7}{16}$. How much cake was left?

2. If $\frac{5}{12}$ is subtrahend from 5, what is the difference?

POST ASSESMENT

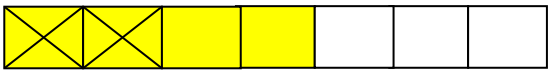
A. Directions: Study the illustration that visualizes the addition and subtraction of similar fractions. Choose the best answer.

1.



A. $\frac{2}{9}+\frac{1}{9}=\frac{3}{9}$ B. $\frac{2}{9}+\frac{2}{9}=\frac{4}{9}$ C. $\frac{3}{9}+\frac{2}{9}=\frac{5}{9}$ D. $\frac{2}{9}+\frac{3}{9}=\frac{5}{9}$

2.



a. $\frac{4}{7}-\frac{2}{7}=\frac{2}{7}$ B. $\frac{7}{7}-\frac{4}{7}=\frac{3}{7}$ C. $\frac{7}{7}-\frac{2}{7}=\frac{5}{7}$ D. $\frac{4}{7}-\frac{1}{7}=\frac{3}{7}$

B. Directions: Match expressions on the left with the illustrations on the right.

1.) $\frac{3}{5}+\frac{2}{10}$ 

2.) $\frac{3}{4}-\frac{1}{2}$

A. 

B. 

C. 

C. Directions: Study the illustration. Choose the letter of the correct answer.

1. 

a. $2\frac{3}{8}$ b. $6\frac{3}{8}$ c. $3\frac{3}{8}$ d. $3-\frac{5}{8}$

2. 

a. $4\frac{5}{5}$ b. $4\frac{2}{5}$ c. $4\frac{3}{5}$ d. $3\frac{5}{5}$

KEY ANSWER

What's In

A. 1. $\frac{6}{8}$ or $\frac{3}{4}$ 2. $\frac{4}{8}$ or $\frac{1}{2}$

B.

2.**C.** 1. $\frac{2}{6}$  $\frac{11}{12}$ 2. $\frac{2}{2}$  $\frac{2}{8}$

What's New

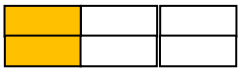
A. 1. $\frac{1}{4}$ 2. $\frac{4}{6}$ or $\frac{2}{3}$

B.

1. 
2. 

C. 1. $\frac{6}{8}$ or $\frac{3}{4}$ 2. $\frac{6}{9}$ or $\frac{2}{3}$

What Is It

A. 1. $\frac{6}{8}$ 2.  $\frac{2}{6}$

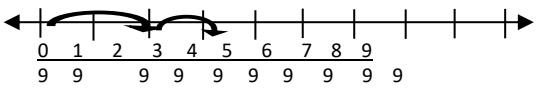
B.

1. 
2. 

C. 1. $2\frac{1}{3}$ 2. $3\frac{3}{7}$

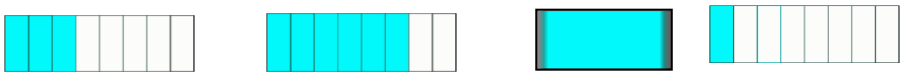
What's More

A. 1.



2.

B. 1.



2 .

C. 1.

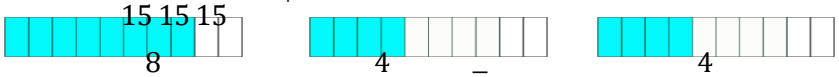
2.

What I Can Do

A. 1. $\frac{4}{7}$ 2. $\frac{3}{15}$ *or* $\frac{1}{5}$

B.

1. $\frac{6}{15}$ $\frac{5}{15}$ $\frac{11}{15}$ + =



2. $\frac{8}{10}$ - $\frac{4}{10}$ = = $\frac{4}{10}$

C. 1. $15\frac{9}{16}$ cassava cake left2. $4\frac{7}{12}$

Post Assessment

A. 1. A 2. A **B.** 1.B 2.C C. 1. A 2. C

References:

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

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