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Mathematics
Quarter 2 – Module 5: Addition and Subtraction of Similar Fractions

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ADM

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Alternative Delivery Mode
Quarter 2 – Module 5: Addition and Subtraction of Similar Fractions
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Secretary: Leonor Magtolis Briones
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Development Team of the Module

Writer: Criselda N. Lagamayo

Editors: Annavi M. Miravilla, Josephine D. Recebido, Sonia F. Aninipot

Reviewers: Marjorie Ann F. Deramas, Elena D. Hubilla, Erick A. Aninipot, Antonio Herrera

Illustrator: Jason C. Borabo

Layout Artist: Teresa Vissia B. Suñga

Management Team: Regional Director: Gilbert T. Sadsad
CLMD Chief: Francisco B. Bulalacao Jr.
Regional EPS In Charge of LRMS: Grace U. Rabelas
Regional EPS In Charge of Math: Loyd H. Botor
Regional ADM Coordinator: Ma. Leilani R. Lorico
CID Chief : Monserat D. Guemo
Division EPS In Charge of LRMS: Florena M. Deuna

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Department of Education – Region V

Office Address: Regional Center Site, Rawis, Legazpi City 4500
Telefax: 0917-178-1288
E-mail Address: region5@deped.gov.ph

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Mathematics
Quarter 2 – Module 5: Addition and Subtraction of Similar Fractions

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Introductory Message

This Self-Learning Module (SLM) is prepared so that you, our dear learners, can continue your studies and learn while at home. Activities, questions, directions, exercises, and discussions are carefully stated for you to understand each lesson.

Each SLM is composed of different parts. Each part shall guide you step-by-step as you discover and understand the lesson prepared for you.

Pre-tests are provided to measure your prior knowledge on lessons in each SLM. This will tell you if you need to proceed on completing this module or if you need to ask your facilitator or your teacher's assistance for better understanding of the lesson. At the end of each module, you need to answer the post-test to self-check your learning. Answer keys are provided for each activity and test. We trust that you will be honest in using these.

In addition to the material in the main text, Notes to the Teacher are also provided to our facilitators and parents for strategies and reminders on how they can best help you on your home-based learning.

Please use this module with care. Do not put unnecessary marks on any part of this SLM. Use a separate sheet of paper in answering the exercises and tests. And read the instructions carefully before performing each task.

If you have any questions in using this SLM or any difficulty in answering the tasks in this module, do not hesitate to consult your teacher or facilitator.

Thank you.

What I Need to Know

Fractions are part of a whole and of different kinds. Just like whole numbers, they can also be added or subtracted.

In this lesson, you will learn how to add and subtract similar fractions (fractions with the same denominators). The activities allow you to explore various ways in adding and subtracting similar fractions.

At the end of the lesson, you should be able to:

1. visualize addition and subtraction of similar fractions;
2. perform addition and subtraction of similar fractions; and
3. solve word problems involving addition and/or subtraction of similar fractions.

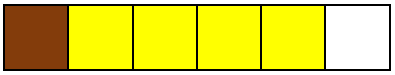
LESSON I: Addition of Similar Fractions

What I Know

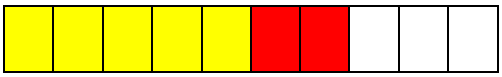
A. Put a check on the box if the number sentence is correct and cross if it is not.

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

☐ 2. $\frac{1}{6} + \frac{1}{6} = \frac{5}{6}$



3. $\frac{5}{10} + \frac{2}{10} = \frac{7}{10}$



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

B. Draw lines to show the given fractions. Add the fractions. Write your answer in lowest term.

5.

$$\frac{8}{12} + \frac{2}{12} = \square$$

6.

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

C. Add the following fractions. Write your answer in the box.

7. $\frac{5}{8} + \frac{2}{8} = \square$

8. $\frac{1}{4} + \frac{2}{4} = \square$

9. $\frac{8}{12} + \frac{4}{12} = \square$

10. $\frac{8}{10} + \frac{1}{10} = \square$

To check, go to page 26 for the ***Answer Key***. If you got a score of 8 – 10, VERY GOOD! The lesson will be easy for you. If you got a score of 7 or below, study carefully the discussion and examples in this module.

What's In

Fractions are said to be part of a given whole. They are of different kinds. There are sets of fractions which have the same denominators. We call these fractions as ***similar fractions***. Similar fractions can be added.

But before we proceed in adding similar fractions, let's have first a short review on how to find the Greatest Common Factor or GCF.

How do we find the GCF of two numbers?

What methods can we use to find the GCF?

To divide two groups into smaller groups of equal number, find the common factors of the two numbers. The greatest common factor or GCF of the two numbers is the largest of all the common factors.

To find the GCF, we can use three methods:

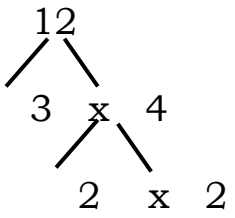
a. ***Listing Method*** – list down all the factors of each number. Then choose the largest of the common factors.

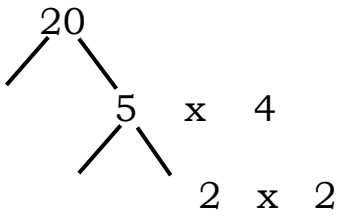
12 : 1, 2, 3, 4, 6, 12

20 : 1, 2, 4, 5, 10, 20

The GCF of 12 and 20 is 4

b. ***Prime Factorization Method*** – get the prime factorization of each number using a factor tree, then get the product of the common prime factors.





12 = 3 x 2 x 2

20 = 5 x 2 x 2

2 x 2

GCF = 2 x 2 = 4

c. ***Continuous Division/Decomposition Method*** – divide the given numbers by the common prime factor repeatedly until there is no common prime factor for the two numbers anymore. The product of the prime factors that were used to divide the given numbers is the greatest common factor.

2	12, 20
2	6, 10
	3, 5

GCF = 2 x 2 = 4

Find the GCF of the following numbers.

1. 4 = _____
   12 = _____
   GCF = _____

2. 10 = _____
   50 = _____
   GCF = _____

3. 25 = _____
   30 = _____
   GCF = _____

4. 12 = _____
   24 = _____
   GCF = _____

5. 18 = _____
   36 = _____
   GCF= _____

What's New

Addition of Similar Fractions

Adding fractions is like combining sets or groups of objects.

But how do we add similar fractions? Study this problem.

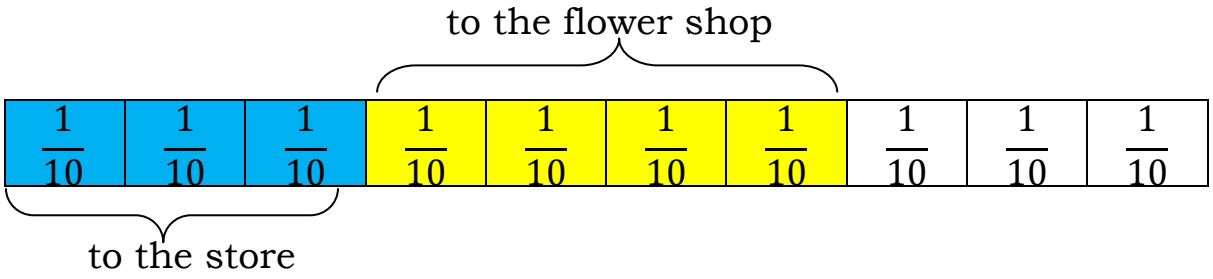
Aaron runs an errand for his mother. He walks $\frac{3}{10}$ of a kilometer from his house to the store to buy 5 kilograms of rice. He again walks $\frac{4}{10}$ of a kilometer to buy some flowers for his mother. How far did he walk?

What is It

Aaron seemed to have done a lot of walking. How do we find out the distance he walked? Let us study how we can visualize addition of similar fractions.

To get the distance Aaron had walked, we add the fractions. Notice that the fractions are <u>similar</u> because they have the same denominators. Remember in adding similar fractions, just add the numerators and simply copy the denominator.

$$\frac{3}{10} + \frac{4}{10} = \frac{3+4}{10} = \frac{7}{10}$$ of a kilometer



Therefore, Aaron walked a distance of $\frac{7}{10}$ of a kilometer to buy rice and flowers.

Sometimes, the answer we get is an improper fraction. If that happens, simply change the improper fraction to a mixed number. See the example below.

$\frac{7}{10} + \frac{8}{10} = \frac{7+8}{10} = \frac{15}{10}$; $\frac{15}{10}$ is also equal to $\frac{10}{10} + \frac{5}{10}$ **or 1 ½**

In adding similar fractions, you have to:

- add the numerators and copy the denominator
- reduce your answer to lowest term

Let us have more examples.

a) $\frac{2}{10} + \frac{4}{10} = \frac{\mathbf{2+4}}{\mathbf{10}} = \mathbf{\frac{6}{10}}$

Since both the numerator and the denominator can still be divided by 2, their GCF, then it will be reduced to lowest term $\frac{6}{10} \div \frac{2}{2} = \mathbf{\frac{3}{5}}$.

The answer is $\mathbf{\frac{6}{10}}$ or $\mathbf{\frac{3}{5}}$.

b) $\frac{5}{11} + \frac{3}{11} = \mathbf{\frac{8}{11}}$ ☐

This is already the final answer because there is no GCF that can divide both the numerator and denominator.

Okay kid, did you find it easy to understand?

What's More

Let us answer the following exercises:

Add the fractions. Write your answer in simplest form.

1. $\frac{2}{5} + \frac{2}{5} =$ ☐

2. $\frac{5}{12} + \frac{3}{12} =$ ☐

3. $\frac{7}{15} + \frac{4}{15} =$ ☐

4. $\frac{6}{9} + \frac{2}{9} =$ ☐

5. $\frac{9}{16} + \frac{3}{16} =$ ☐

To check, go to page 26 for the ***Answer Key***.

If you got a score of 4 - 5, VERY GOOD! You can proceed to the next activity. If you got 3 or below, take time to review the discussion in the previous pages.

What I Have Learned

How do you add similar fractions?

To add similar fractions, add the numerators and copy the denominator. Reduce your answer to lowest term.

What I Can Do

A. Add the following similar fractions and express your answer in lowest term. Choose the correct answer from the options given.

1. $\frac{8}{10} + \frac{3}{10} =$	$2\frac{5}{10}$	$1\frac{1}{10}$	$1\frac{7}{10}$
2. $\frac{1}{6} + \frac{4}{6} =$	$\frac{1}{2}$	$\frac{4}{5}$	$\frac{5}{6}$
3. $\frac{7}{8} + \frac{2}{8} =$	$1\frac{1}{8}$	$1\frac{4}{8}$	$1\frac{5}{8}$
4. $\frac{5}{9} + \frac{2}{9} =$	$\frac{7}{9}$	$\frac{4}{9}$	$\frac{5}{9}$
5. $\frac{9}{13} + \frac{6}{13} =$	$1\frac{6}{13}$	$1\frac{4}{13}$	$1\frac{2}{13}$

To check, go to page 26 for the ***Answer Key***. If you got a score of 4 - 5, VERY GOOD! You can proceed to the next activity. If you got 3 or below, take time to review the discussion in the previous pages.

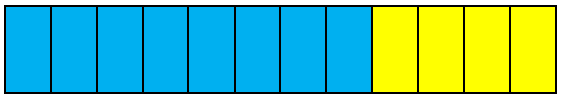
Assessment

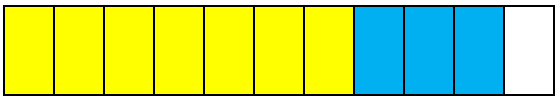
For items 1 – 3, match each equation to its correct illustration. Write the letter of the correct answer.

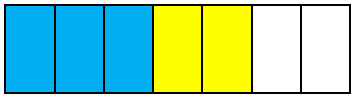
1. $\frac{3}{7} + \frac{2}{7} = \frac{5}{7}$

2. $\frac{8}{12} + \frac{4}{12} = \frac{12}{12}$

3. $\frac{7}{11} + \frac{3}{11} = \frac{10}{11}$

a. 

b. 

c. 

Draw lines to show the given fractions. Add the fractions. Write your answer in lowest term.

4. $\frac{3}{9} + \frac{2}{9} =$ ☐

5. $\frac{5}{11} + \frac{3}{11} =$ ☐

For items 6 – 10, perform the indicated operations. Write your answer in simplest form.

6. $\frac{4}{18} + \frac{7}{18} =$

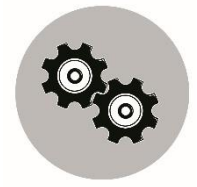
7. $\frac{4}{9} + \frac{4}{9} =$

8. $\frac{6}{9} + \frac{3}{9} =$

9. $\frac{8}{13} + \frac{4}{13} =$

10. $\frac{11}{16} + \frac{2}{16} =$

To check, go to page 27 for the ***Answer Key***. If you got a score of 8 - 10, VERY GOOD! You can proceed to the next activity. If you got 7 or below, take time to review the discussion in the previous pages.



Additional Activities

Figure out the answer to the statement below by adding the following fractions. Write the letter that matches the given fractions in the box.

D → $\frac{6}{15} + \frac{8}{15} =$	**E** → $\frac{1}{6} + \frac{4}{6} =$	**B** → $\frac{3}{8} + \frac{2}{8} =$
T → $\frac{5}{8} + \frac{4}{8} =$	**O** → $\frac{3}{10} + \frac{4}{10} =$	**I** → $\frac{2}{5} + \frac{3}{5} =$
E → $\frac{4}{12} + \frac{6}{12} =$	**N** → $\frac{8}{9} + \frac{7}{9} =$	**A** → $\frac{5}{12} + \frac{3}{12} =$

This is a word you can use to describe Aaron because he knows how to follow his parent's instructions. He is:

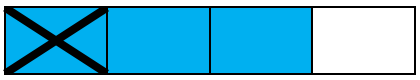
____	____	____	____	____	____	____	____
$\frac{7}{10}$	$\frac{5}{8}$	$\frac{5}{6}$	$\frac{14}{15}$	1	$\frac{5}{6}$	$1\frac{2}{3}$	$1\frac{1}{8}$

Lesson II – Subtraction of Similar Fractions

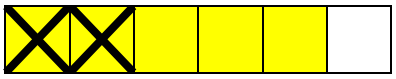
What I Know

A. Express the following figures into fraction sentences. Solve for the answer.

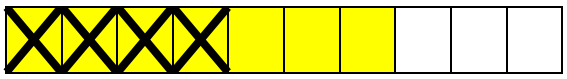
1. ☐ - ☐ = ☐



2. ☐ - ☐ = ☐



3. ☐ - ☐ = ☐



4. ☐ - ☐ = ☐

5. ☐ - ☐ = ☐

B. Subtract the following fractions. Write your answer in the box.

6. $\frac{5}{8} - \frac{2}{8} =$ ☐

9. $\frac{8}{12} - \frac{4}{12} =$ ☐

7. $\frac{3}{4} - \frac{2}{4} =$ ☐

10. $\frac{8}{10} - \frac{1}{10} =$ ☐

8. $\frac{4}{7} - \frac{2}{7} =$ ☐

To check, go to page 27 for the ***Answer Key***. If you got a score of 8 – 10, VERY GOOD! The lesson will be easy for you. If you got a score of 7 or below, study carefully the discussion and examples in this module.

What's In

Fractions are said to be part of a given whole. They are of different kinds. There are sets of fractions which have the same denominators. We call these fractions as ***similar fractions***. Similar fractions can be subtracted.

Before we proceed in subtracting similar fractions let's have first a short review on how to find for the Greatest Common Factor or GCF.

How do we find the greatest common factor or GCF of two numbers?

What methods can we use to find the GCF?

To divide two groups into smaller groups of equal number, find the common factors of the two numbers. The greatest common factor or GCF of the two numbers is the largest of all the common factors.

To find the GCF, we can use three methods:

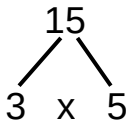
a. ***Listing Method*** – list down all the factors of each number. Then **choose** the largest of the common factors.

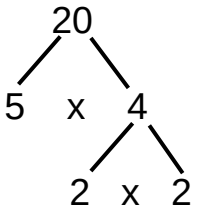
15 : 1, 3, 5, 15

20 : 1, 2, 4, 5, 10, 20

The GCF of 15 and 20 is 5

b. ***Prime Factorization Method*** – get the prime factorization of each number using a factor tree, then get the product of the common prime factors.





15 = 5 x 3

20 = 5 x 2 x 2 GCF = 5

c. ***Continuous Division/Decomposition Method*** – divide the given numbers by a common prime factor repeatedly until there is no common prime factor for the two numbers anymore. The product of the prime factors used to divide the given numbers is the greatest common factor.

5	15, 20
	3 4

GCF = 5

Find the GCF of the following numbers.

1. 6 = _____
   14 = _____
   GCF = _____

2. 4 = _____
   10 = _____
   GCF = _____

3. 14 = _____
   18 = _____
   GCF = _____

4. 8 = _____
   36= _____
   GCF= _____

5. 12 = _____
   16 = _____
   GCF= _____

What's New

In Lesson 1, you have learned about adding similar fractions. Here in Lesson 2, you will learn how to subtract similar fractions. Do you know how to subtract similar fractions?

Subtraction of Similar Fractions

Subtraction of fractions is similar with taking away sets or groups from another sets or groups of objects.

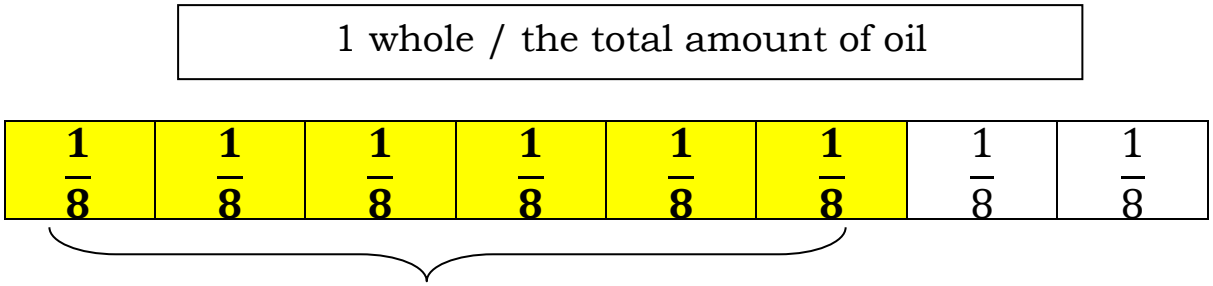
But how do we subtract similar fractions? Study this problem.

Diego wants to surprise his parents. He plans to cook breakfast for them. He saw that there is $\frac{6}{8}$ of a cup of vegetable oil in a container. He used $\frac{2}{8}$ of a cup of vegetable oil to fry some eggs.

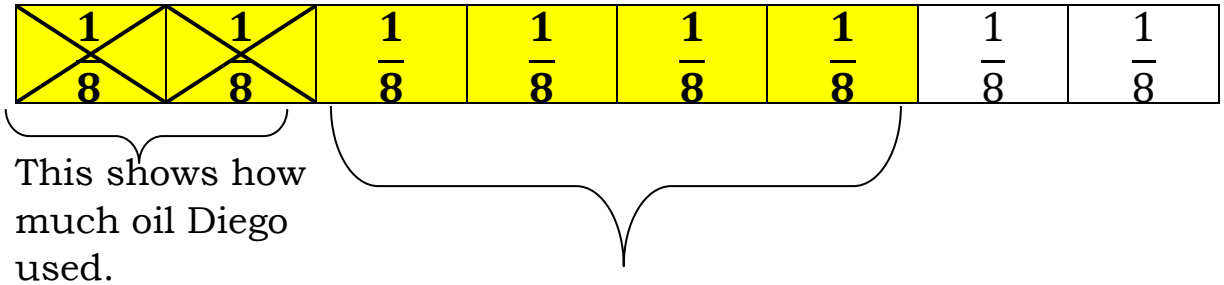
What is It

How do we find out how much oil was left in the container? How do we solve for the answer?

Let us use blocks to solve the problem.



This shows how much oil Diego saw in the container.



This shows how much oil Diego used.

This much oil was left.

There is $\frac{4}{8}$ of a cup of vegetable oil left in the container which is also equal to $\frac{1}{2}$.

In subtracting similar fractions, you have to:

- subtract the numerators and copy the denominator
- reduce your answer to lowest term

Let us have some more examples.

SUBTRACTING SIMILAR FRACTIONS

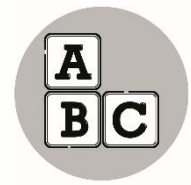
a) $\frac{15}{20} - \frac{5}{20} = \frac{15-5}{20} = \frac{10}{20}$

Since both the numerator and the denominator can still be divided by 10, their GCF, then we need to reduce it to lowest term.

$\frac{10}{20} \div \frac{10}{10} = \boxed{\frac{1}{2}}$ ← this is now the final answer

$\frac{9}{13} - \frac{6}{13} = \frac{9-6}{13} = \boxed{\frac{3}{13}}$ ← this is already in lowest term because there is no more common number that can divide both the numerator and denominator.

Okay kid, did you find it easy to understand?



What's More

Let us answer the following exercises:

Subtract the fractions. Write your answer in simplest form.

1. $\frac{4}{5} - \frac{2}{5} = \square$

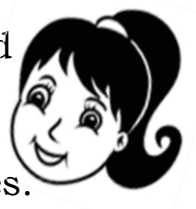
2. $\frac{5}{12} - \frac{3}{12} = \square$

3. $\frac{7}{15} - \frac{4}{15} = \square$

4. $\frac{6}{9} - \frac{2}{9} = \square$

5. $\frac{9}{16} - \frac{3}{16} = \square$

To check, go to page 27 for the ***Answer Key***. If you got a score of 4 - 5, VERY GOOD! You can proceed to the next activity. If you got 3 or below, take time to review the discussion in the previous pages.



What I Have Learned

How do you subtract similar fractions?

To subtract similar fractions, subtract the numerators and copy the denominator. Reduce your answer to lowest term.

What I Can Do

Subtract the following similar fractions. Circle the correct answer.

1. $\frac{8}{10} - \frac{3}{10} =$ $\frac{5}{10}$ $\frac{4}{10}$ $\frac{7}{10}$

2. $\frac{2}{6} - \frac{1}{6} =$ $\frac{1}{6}$ $\frac{4}{6}$ $\frac{3}{6}$

3. $\frac{7}{8} - \frac{2}{8} =$ $\frac{7}{8}$ $\frac{4}{8}$ $\frac{5}{8}$

4. $\frac{5}{9} - \frac{1}{9} =$ $\frac{7}{9}$ $\frac{4}{9}$ $\frac{3}{9}$

5. $\frac{9}{13} - \frac{6}{13} =$ $\frac{7}{13}$ $\frac{4}{13}$ $\frac{3}{13}$

To check, go to page 27 for the ***Answer Key***. If you got a score of 4 - 5, VERY GOOD! You can proceed to the next activity. If you got 3 or below, take time to review the discussion in the previous pages.

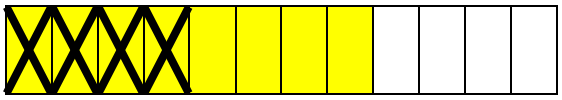
Assessment

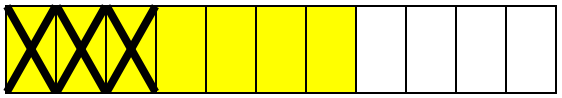
For items 1 - 3, match the following equations to its correct illustration. Write the letter of the correct answer.

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

2. $\frac{8}{12} - \frac{4}{12} = \frac{4}{12}$

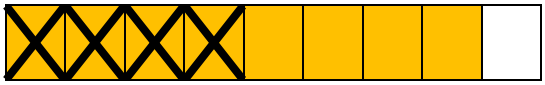
3. $\frac{7}{11} - \frac{3}{11} = \frac{4}{11}$

a. 

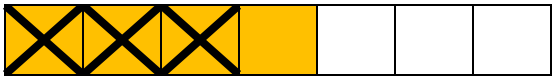
b. 

c. 

For items 4 and 5, express the following figures into fraction sentences. Solve for the answer.

4. 

_____ - _____ = _____

5. 

_____ - _____ = _____

For items 6 – 10, subtract the following fractions. Write your answer in simplest form.

6. $\frac{14}{18} - \frac{7}{18} =$

7. $\frac{8}{13} - \frac{4}{13} =$

8. $\frac{8}{9} - \frac{4}{9} =$

9. $\frac{11}{17} - \frac{7}{17} =$

10. $\frac{9}{12} - \frac{5}{12} =$

To check, go to page 28 for the ***Answer Key***. If you got a score of 8 - 10, VERY GOOD! You can proceed to the next activity. If you got 7 or below, take time to review the discussion in the previous pages.

Additional Activities

A. Draw lines to show the given fractions. Subtract the fractions. Write your answer in lowest term.

1. ☐

$$\frac{8}{12} - \frac{2}{12} = \square$$

2. ☐

$$\frac{4}{8} - \frac{2}{8} = \square$$

Lesson III – Solving Problems Involving Addition and Subtraction of Similar Fractions

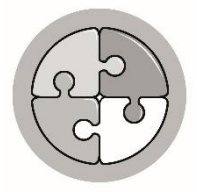
What I Know

Read then solve the following problems on your answer sheet. (5 points each)

1. Mark spent $\frac{4}{1\ 0}$ of an hour sweeping the floor and $\frac{3}{10}$ of an hour watering the plants. How long did he work?

2. Khel and Neo sold $\frac{22}{100}$ kg of old newspapers on Saturday and $\frac{72}{100}$ kg on Sunday. What is the difference in the weight of the newspapers sold on Saturday and Sunday?

To check, go to page 28 for the ***Answer Key***. If you got a score of 8 – 10, VERY GOOD! The lesson will be easy for you. If you got a score of 7 or below, study carefully the discussion and examples in this module.



What's In

Fractions with the same denominators are called similar fractions. We add or subtract these kinds of fractions by just

adding or subtracting the numerators and copying the denominator.

I have here a simple activity for you. You will just perform the indicated operation and express your answer to lowest term. Write your answer on the blank.

1. $\frac{10}{15} - \frac{5}{15} =$ _____

2. $\frac{5}{12} + \frac{3}{12} =$ _____

3. $\frac{7}{14} - \frac{5}{14} =$ _____

4. $\frac{6}{9} + \frac{2}{9} =$ _____

5. $\frac{17}{20} - \frac{9}{20} =$ _____

To check, go to page 28 for the ***Answer Key***. If you got a score of 4 - 5, VERY GOOD! You are now ready for this module. If you got 3 or below, take time to review past lessons.

What's New

Lance served the bread he baked to his friends Paolo and Gelo. Paolo ate $\frac{5}{8}$ of the bread and Gelo ate $\frac{2}{8}$ of the same bread. How much more did Paolo eat than Gelo?

Can you come up with a plan to solve this problem? What is the first thing we should do to figure out the solution?

What is It

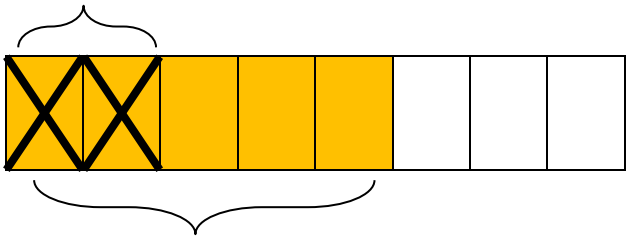
Let us recall the steps we learned when solving word problems.

There are ways to solve word problems. These are:

a. Drawing a model
b. Solving for the answers following appropriate steps

A. Drawing a model

Bread ate by Gelo



Bread ate by Paolo

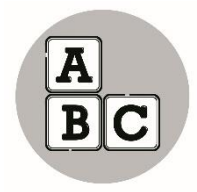
Write the number sentence

$\frac{5}{8} - \frac{2}{8} = \frac{5-2}{8} = \frac{3}{8}$ Therefore, Paolo ate $\frac{3}{8}$ more bread than Gelo

B. Solving for the answers following appropriate steps

Step 1: Understand	What facts are given? $\frac{5}{8}$ pizza eaten by Paolo $\frac{2}{8}$ pizza eaten by Gelo What is asked? How much more did Paolo eat than Gelo?
Step 2: Plan	What strategy will you use? Solving for the answer.
Step 3: Solve	Write the number sentence

	$\frac{5}{8} - \frac{2}{8} = \frac{5-2}{8} = \frac{3}{8}$ Therefore, Paolo ate $\frac{3}{8}$ more bread than Gelo.
Step 4: Look back	Ask yourself the following questions: • Did the equation help you get the correct answer? • Does the answer make sense?



What's More

Read each problem then solve.

1. Maika ate $\frac{3}{8}$ of her oranges. Then, she ate $\frac{4}{8}$ more after 10 minutes. How many oranges did she eat?

2. Mother used $\frac{7}{12}$ of a cup of flour to make pancakes. Then she used $\frac{4}{12}$ of a cup to make banana fritters. How much flour did she use in all?

3. A recipe reads $\frac{3}{4}$ cup of milk and $\frac{1}{4}$ cup of water. How much more milk is there than water?

To check, go to pages 28 – 29 for the ***Answer Key***. Congratulations for reaching this far! Few more activities and you're done with this module.

What I Have Learned

How do you solve word problems involving addition and subtraction of similar fractions?

There are ways to solve word problems like:

a. Drawing a model
b. Solving for the answers following appropriate steps

What I Can Do

Read and solve the following problems.

(1 – 5). The boy scouts spent $\frac{10}{12}$ hour doing all their daily activities. Of this, they used $\frac{5}{12}$ hour in hiking. How much time did they use for other daily activities?

(6 – 10). Liza bought *bibingka*. She sliced it into 8 equal pieces. She ate

$\frac{1}{8}$ and Danny ate $\frac{3}{8}$. What part of *bibingka* did they eat?

To check, go to page 29 for the ***Answer Key***.
If you got a score of 5 - 10, VERY GOOD! You can proceed to the next activity. If you got 4 or below, take time to review the discussion in the previous

Assessment

Read and solve the following problems.

(1 – 5). Sean's house is $2\frac{8}{10}$ km away from the school. He only walks to school everyday. He already walked $\frac{3}{10}$ of a kilometer on his way home. How far does he still have to walk?

(6 – 10). Linda planted *pechay* in $\frac{3}{10}$ of the rectangular plot. In the $\frac{6}{10}$ part, she planted celery. How big was the part of the rectangular plot planted with vegetables?

To check, go to pages 29-30 for the ***Answer Key***.
If you got a score of 8 - 10, VERY GOOD! You can proceed to the next activity. If you got 7 or below, take time to review the discussion in the previous pages.

Additional Activities

Read and solve the problem.

Dad and my brother Ben are putting cement tiles in our backyard. Yesterday, they were able to finish tiling $\frac{7}{12}$ of the garden. Today, they finished $\frac{5}{12}$ of the garden. Are they already done? Or do they still have work to do? Justify your answer.

Answer Key

Lesson 1 Adding Similar Fractions

What I Know?

1. /
2. X
3. /
4. /

5. $\frac{8}{12} + \frac{2}{12} = \frac{10}{12}$ or $\frac{5}{6}$
6.

$\frac{4}{8} + \frac{2}{8} = \frac{6}{8}$ or $\frac{3}{4}$

7. $\frac{7}{8}$
8. $\frac{3}{4}$
9. $\frac{12}{12}$ or 1
10. $\frac{9}{10}$

What's In

1. 4 = 2 x 2
   12 = 2 x 2 x 3
   GCF = 2 x 2 = 4
2. 10 = 2 x 5
   50 = 2x 5 x 5
   GCF = 2 x 5 = 10
3. 25 = 5 x 5
   30 = 2 x 3 x 5
   GCF = 5
4. 12 = 2 x 2 x 3
   24 = 2 x 2 x 2 x 3
   GCF = 2 x 2 x 3 = 12
5. 18 = 2 x 3 x 3
   56 = 2 x 2 x 2 x 7
   GCF = 2

What's More?

1. $\frac{4}{5}$ 2. $\frac{8}{12}$ or $\frac{2}{3}$ 3. $\frac{11}{15}$ 4. $\frac{8}{9}$ 5. $\frac{12}{16}$ or $\frac{3}{4}$

What I Can do?

1. $1\frac{1}{10}$
2. $\frac{5}{6}$
3.
4. $1\frac{1}{8}$

4. $\frac{7}{9}$
5. $1\frac{2}{13}$

Assessment:

1. c   2. a   3. b

4. $\frac{3}{9} + \frac{2}{9} = \frac{5}{9}$

5. $\frac{5}{11} + \frac{3}{11} = \frac{8}{11}$

6. $\frac{11}{18}$ 7. $\frac{8}{9}$ 8. $\frac{9}{9}$ or 1   9. $\frac{12}{13}$ 10. $\frac{13}{16}$

Lesson 2 Subtracting Similar Fractions

What I Know?

1. $\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$ or $\frac{1}{2}$
2. $\frac{5}{6} - \frac{2}{6} = \frac{3}{6}$ or $\frac{1}{2}$
3. $\frac{7}{10} - \frac{4}{10} = \frac{3}{10}$
4. $\frac{3}{5} - \frac{2}{5} = \frac{1}{5}$
5. $\frac{6}{8} - \frac{4}{8} = \frac{2}{8}$ or $\frac{1}{4}$

6. $\frac{3}{8}$ 7. $\frac{1}{4}$ 8. $\frac{2}{7}$ 9. $\frac{4}{12}$ or $\frac{1}{3}$ 10. $\frac{7}{10}$

What's In

1. 6 = 2 x 3
   14 = 2 x 7
   GCF = 2

2. 4 = 2 x 2
   10 = 2x 5
   GCF = 2

3. 14 = 2 x 7
   18 = 2 x 3 x 3
   GCF = 2

4. 8 = 2 x 2 x 2
   36 = 2 x 2 x 3 x 3
   GCF = 2 x 2 = 4

5. 12 = 2 x 2 x 3
   16 = 2 x 2 x 2 x 2
   GCF = 2 x 2 = 4

What's More?

1. $\frac{2}{5}$ 2. $\frac{2}{12}$ or $\frac{1}{6}$ 3. $\frac{5}{15}$ or $\frac{1}{3}$ 4. $\frac{4}{9}$ 5. $\frac{6}{16}$ or $\frac{3}{8}$

What I Can do?

1. $\frac{5}{10}$ 2. $\frac{1}{6}$ 3. $\frac{5}{8}$ 4. $\frac{4}{9}$ 5. $\frac{3}{13}$

Assessment:

1. c 2. a 3. b

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

6. $\frac{7}{18}$ 7. $\frac{4}{13}$ 8. $\frac{4}{9}$ 9. $\frac{4}{17}$ 10. $\frac{4}{12}$ or $\frac{1}{3}$

Lesson 3: Solving Problems Involving Addition and Subtraction of Similar Fractions

What I Know

1. $\frac{4}{10}$ – hour for sweeping
+ $\frac{3}{10}$ – hours for watering

$\frac{7}{10}$ – length of time Mark worked

2. $\frac{72}{100}$ kg of newspaper on Sunday
+ $\frac{22}{100}$ kg of newspaper on Saturday

$\frac{50}{100}$ or $\frac{1}{2}$ difference in weight of newspapers sold

What's In

1. $\frac{5}{15}$ or $\frac{1}{3}$ 2. $\frac{8}{12}$ or $\frac{2}{3}$ 3. $\frac{2}{14}$ or $\frac{1}{7}$ 4. $\frac{8}{9}$ 5. $\frac{8}{20}$ or $\frac{2}{5}$

What's More

1.

Understand	What facts are given? $\frac{3}{8}$ oranges $\frac{4}{8}$ more oranges What is asked? How many oranges did she eat?
Plan	What strategy do we use? Solving for the answer.
Solve	Write the number sentence $\frac{3}{8} + \frac{4}{8} = \frac{7}{8}$; Maika ate $\frac{7}{8}$ of the oranges in all
Look back	Ask yourself the following questions: • Did the equation help you get the correct answer? • Does the answer make sense?

2.

Understand	What facts are given? $\frac{7}{12}$ cups of flour for pancakes $\frac{4}{12}$ cups of flour for banana fritters What is asked? How much flour did she use in all?
Plan	What strategy do we use? Solving for the answer.
Solve	Write the number sentence $\frac{7}{12} + \frac{4}{12} = \frac{11}{12}$ cup of flour used in all
Look back	Ask yourself the following questions: • Did the equation help you get the correct answer? • Does the answer make sense?

3.

Understand	What facts are given? $\frac{3}{4}$ cup of milk $\frac{1}{4}$ cup of water What is asked? How much more milk is there than water?
Plan	What strategy do we use? Solving for the answer.
Solve	Write the number sentence $\frac{3}{4} - \frac{1}{4} = \frac{2}{4}$ or $\frac{1}{2}$ more milk than water
Look back	Ask yourself the following questions: • Did the equation help you get the correct answer? • Does the answer make sense?

What I Can Do

1.

Understand	What facts are given? $\frac{10}{12}$ hours doing all their daily activities $\frac{5}{12}$ hours in hiking What is asked? How much time did they use for other daily activities?
Plan	What strategy do we use? Solving for the answer.
Solve	Write the number sentence $\frac{10}{12} - \frac{5}{12} = \frac{5}{12}$ hours used for other daily activities
Look back	Ask yourself the following questions: • Did the equation help you get the correct answer? • Does the answer make sense?

2.

Understand	What facts are given? $\frac{1}{8}$ part of *bibingka* Liza ate $\frac{3}{8}$ part of *bibingka* Danny ate What is asked? What part of *bibingka* did they eat?
Plan	What strategy do we use? Solving for the answer.
Solve	Write the number sentence $\frac{1}{8}+\frac{3}{8}=\frac{4}{8}$ or $\frac{1}{2}$ part of *bibingka* Liza and Danny ate
Look back	Ask yourself the following questions: • Did the equation help you get the correct answer? • Does the answer make sense?

Assessment:

1.

Understand	What facts are given? $2\frac{8}{10}$ km Sean's house away from the school $\frac{3}{10}$ km Sean already walked What is asked? How far does he still have to walk?
Plan	What strategy do we use? Solving for the answer.
Solve	Write the number sentence $2\frac{8}{10}-\frac{3}{10}=2\frac{5}{10}$ km or $2\frac{1}{2}$ km ; Sean still have to walk $2\frac{1}{2}$ km
Look back	Ask yourself the following questions: • Did the equation help you get the correct answer? • Does the answer make sense?

2.

Understand	What facts are given? $\frac{3}{10}$ planted *pechay* $\frac{6}{10}$ planted celery What is asked? How big was the part of the rectangular plot planted with vegetables?
Plan	What strategy do we use? Solving for the answer.
Solve	Write the number sentence $\frac{3}{10}+\frac{6}{10}=\frac{9}{10}$ part of rectangular plot planted with vegetables
Look back	Ask yourself the following questions: • Did the equation help you get the correct answer? • Does the answer make sense?

References

Tabilang, Alma R. et. Al, 2015 Mathematics 4 Learner's Material pp. 112 – 128

Guadarrama, Maria Teresita A.et. Al, 2015 Number Smart Worktext in Mathematics pp. 252 - 258

For inquiries or feedback, please write or call:

Department of Education - Bureau of Learning Resources (DepEd-BLR)

Ground Floor, Bonifacio Bldg., DepEd Complex
Meralco Avenue, Pasig City, Philippines 1600

Telefax: (632) 8634-1072; 8634-1054; 8631-4985

Email Address: blr.lrqad@deped.gov.ph * blr.lrpd@deped.gov.ph