

MATHEMATICS - Grade 2

Quarter 3 - Module 6 Illustrate and write division expressions using a variety of concrete and pictorial models and numerals

Self-Learning Module (SLM)

MATATAG Curriculum

First Edition, 2025

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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 clearly 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.

A Pre-test is provided to measure your prior knowledge on lessons in each SLM. This will tell 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 Teachers are also provided to the 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. Read carefully the instructions before performing each task.

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

Thank you.

For the learner

Welcome to the Mathematics - Grade 2 Self-Learning Module (SLM) Illustrate and write division expressions using a variety of concrete and pictorial models and numerals!

In this learning resource, you will have the opportunity to enjoy and successfully achieve relevant competencies at your own pace.

This module offers fun and meaningful opportunities for both guided and independent learning. You will engage with the material and become an active participant in your learning journey.

This module has the following parts and corresponding icons:



What I Need to Know

This gives you an idea of the skills or competencies you are expected to learn in the module.



What I Know

This part includes an activity that aims to check what you already know about the lesson to take. If you get all the answers correctly, you may decide to skip this part.



What's In

This is a brief drill or review to help you link the current lesson with the previous one.



What's New

In this portion, the new lesson is introduced to you in various ways such as through a story, a song, a poem, a problem opener, an activity or a situation.



What is It

This section provides a brief discussion of the lesson. This aims to help you discover and understand new concepts and skills.



What's More

This comprises activities for independent practice to concretize your understanding and skills about the topic. You may check the answers to the exercises using the Answer Key at the end of the module.

**What I Have Learned**

This includes questions or blank sentence/ paragraph to be filled in to process what you learned from the lesson.

**What I Can Do**

This section provides an activity which will help you transfer your new knowledge or skill into real life situations or events.

**Assessment**

This is a task which aims to evaluate your level of mastery in achieving the learning competency.

**Additional Activities**

In this portion, another activity is given to you to enrich your knowledge or skill of the lesson learned. It also ensures retention of learned concepts.

Answer Key

This contains answers to all activities in the module.

At the end of this module, you will also find:

References

This is a list of all sources used in developing this module.

The following are some reminders in using this module:

1. Use the module with care. Avoid unnecessary mark/s on any part of the module. Use a separate sheet of paper in answering the exercises.
2. Answer *What I Know* before moving on to the other activities included in the module.
3. Carefully read the instructions before doing each task.
4. Observe honesty and integrity in doing the tasks and in checking your answers.
5. Finish the task at hand before proceeding to the next.
6. Return this module to your teacher/facilitator once you are through with it.

If you encounter any difficulty in doing the tasks in this module, consult your teacher or facilitator. Always bear in mind that you are not alone. We hope that through this material, you will experience meaningful learning and gain a deep understanding of the relevant competencies.

For the facilitator

Welcome to the Mathematics Grade 2 Self-Learning Module on Representing and describing circles, half-circles and quarter-circles!

The Curriculum Implementation Division (CID) through the Learning Resource Management Section (LRMS) launched this module in cooperation with the Division's Teacher Developers, Learning Resource Evaluators (LREs), Information and Technology Officer, and subject matter experts in Mathematics and English. This has been especially developed, quality-assured, and validated to enable you to help the learners overcome their educational obstacles—personal, social, and economic—while meeting the standards outlined in the MATATAG Curriculum.

This learning resource hopes to engage the learners in guided and independent learning activities. It further aims to help them acquire the needed 21st century skills while taking into consideration their needs and circumstances.

As a facilitator, you are expected to orient the learners on how to use this module. You also need to keep track of their progress while allowing them to manage their learning. In addition, you are enjoined to encourage and assist the learners as they do the tasks contained in the module.

MATHEMATICS

Quarter 3 - Module 6

Illustrate and write division expressions
using a variety of concrete and
pictorial models and
numerals

Lesson 1 - Equal sharing or formation of equal groups of objects



What I Need to Know

Good day, Mathletes! In this module, you will gain an understanding on how to illustrate and write division expressions using a variety of concrete and pictorial models and numerals, in modelling division as equal sharing or formation of equal groups of objects.

Remember! Equal sharing is a process of division in which a given quantity of items is separated into a given number of groups so that each group has the same number of items.

At the end of this module, you are expected to:

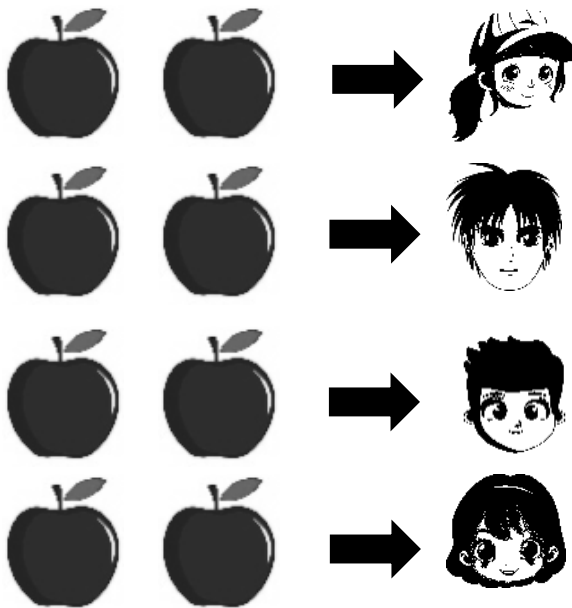
1. use objects to model dividing into equal groups, and
2. make equal groups of a given number and then count the groups.



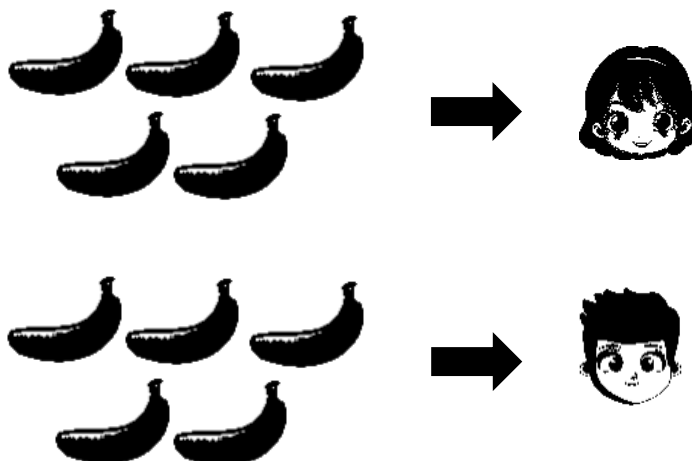
What I Know

Before we start practicing, let's see what you already know about equal sharing and grouping. Let's get started with some fun exercises where you can practice equal sharing and forming equal groups.

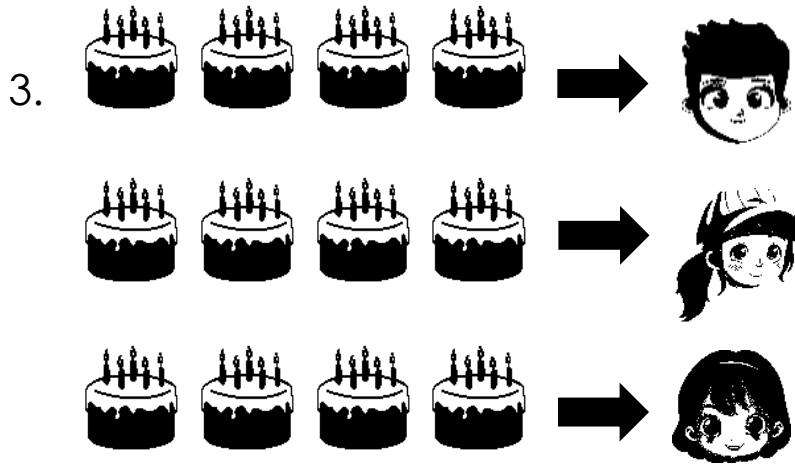
Directions: Divide the food among the kids and write the division equation.

1. 

$$8 \div 4 = \underline{\quad}$$

2. 

$$10 \div 2 = \underline{\quad}$$



$$12 \div 3 = \underline{\quad}$$

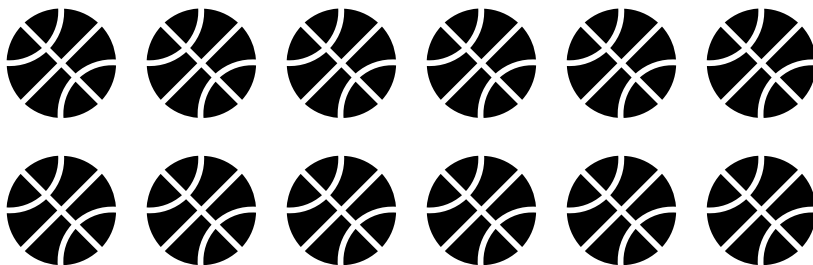


What's In

In the previous module, you have learned about illustrating division through equal distribution of a number of objects into several groups.

Directions: Group the objects into equal sets.

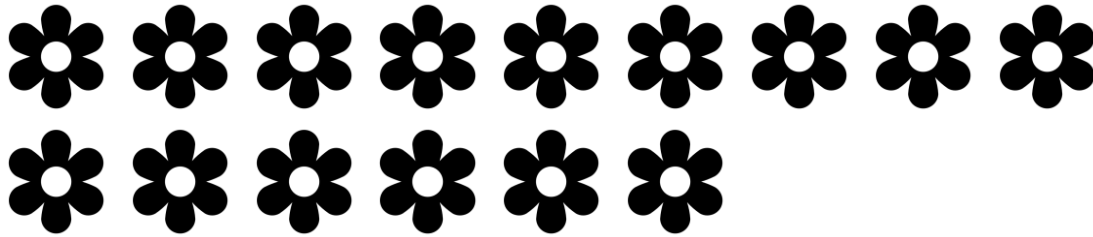
1. 12 basket balls to be grouped into 3.



2. 10 apples to be grouped into 2.



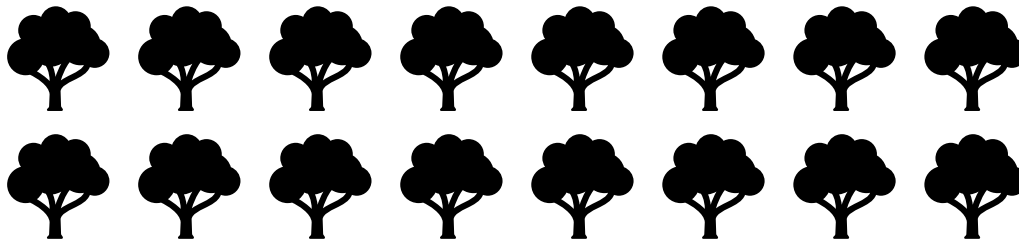
3. 15 flowers to be grouped into 3.



4. 8 butterflies to be grouped into 4.



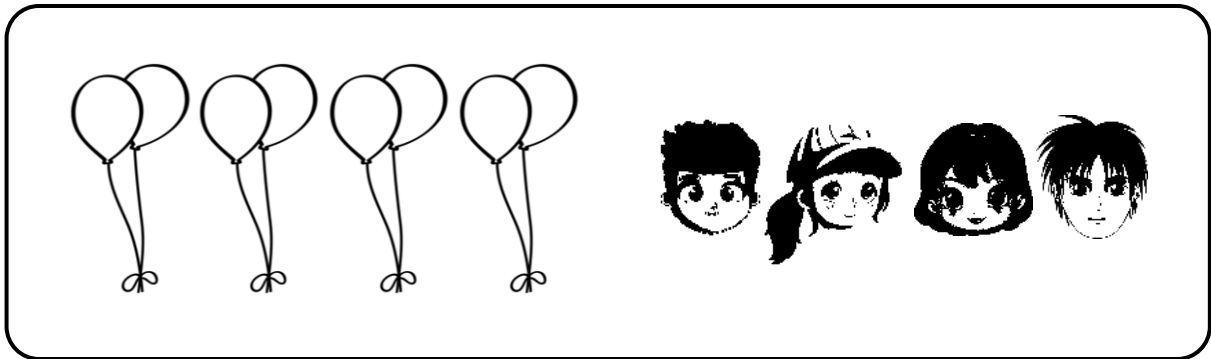
5. 16 trees to be grouped into 4.



What's New

Equal sharing is the division of a quantity or a set of items into smaller, equal portions. When we know how many things are being shared and how many groups there are, but not how many items or how big each group is, then equal sharing takes place.

8 balloons are to be distributed among 4 kids. How many balloons will each kid get?



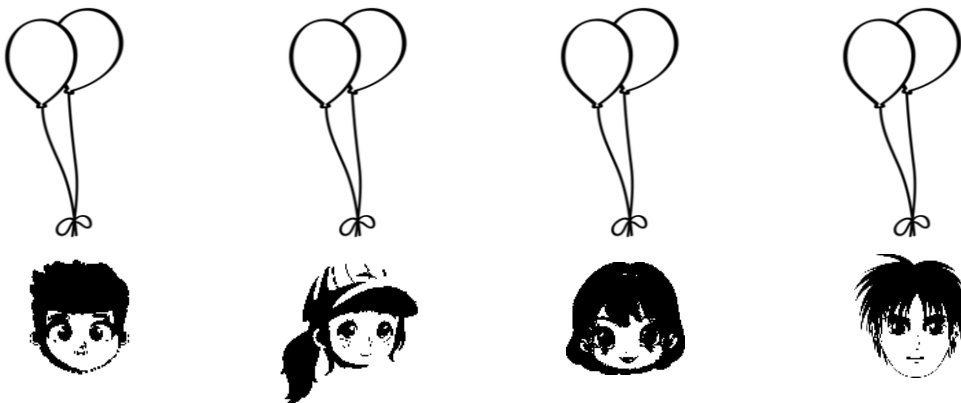
Number to be divided = 8 and number of groups = 4

Size of each group = Number of balloons each kid gets = ?

We can find it by dividing 8 by 2.

$8 \div 4 = 2$. Quotient is 2

So, there will be 4 equal shares and each kid will get 2 balloons.



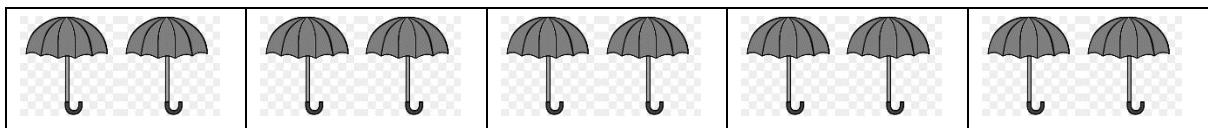
Equal Shares of a Group of Objects

When shares are equal, each share or group has the same number of objects. The groups that have the same number of objects are called “equal groups.”

Equal shares of objects can be done in many ways, depending on the number of shares or portions we want to create.

For example, 10 umbrellas can be equally grouped as follows:

First Way:



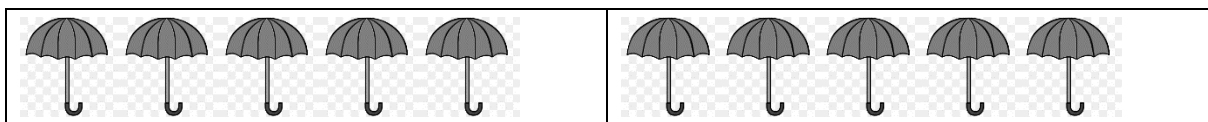
There are 10 umbrellas. There are 5 groups.

Each group has 2 umbrellas.

So, 5 groups with 2 umbrellas = 10 umbrellas.

You can also write the following expression to represent the situation: $10 \div 5 = 2$

Second Way:



There are 10 umbrellas. There are 2 groups.

Each group has 5 umbrellas.

So, 2 groups with 5 umbrellas = 10 umbrellas

You can write the number sentence as, $10 \div 5 = 2$



What is It

Kids! Today, we're going to continue learning about equal sharing and grouping. Understanding that sharing equally helps us organize things fairly. Let's move on to some activities where we can practice what we've learned. Are you ready?

Example:

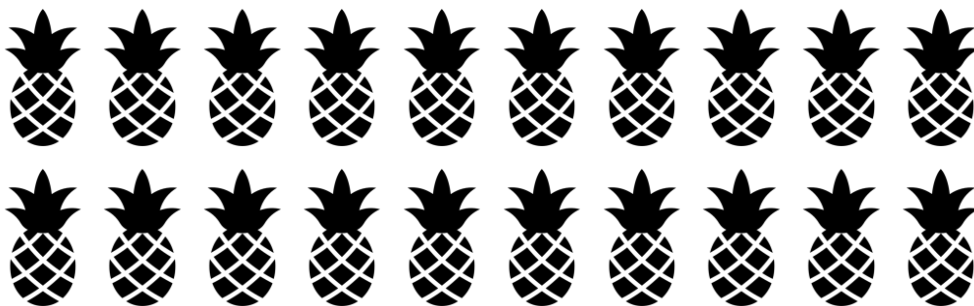
Jane has 20 pineapples with her. She wants to divide them equally in different boxes. Give any two ways by which she can arrange 20 pineapples equally in boxes?

Solution:

There are 20 pineapples in total. Jane can arrange them in two different ways.

1st way: Two equal shares

$20 \div 2 = 10$, as shown in the image below.

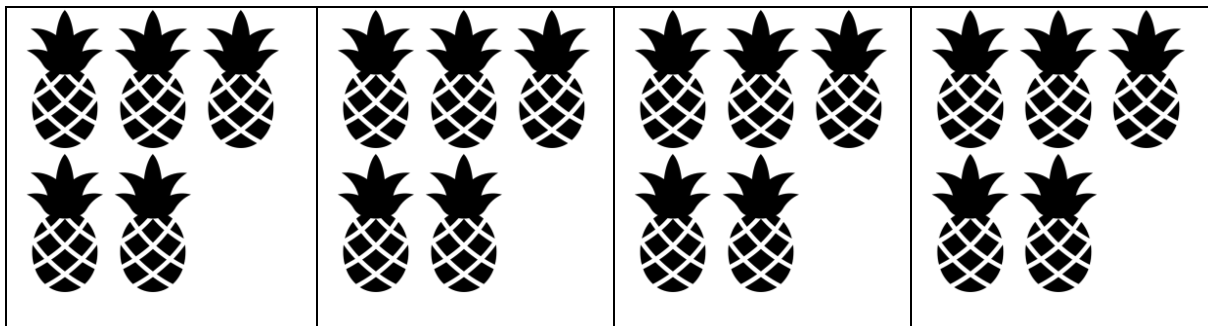


So, 20 pineapples can be arranged in 2 boxes containing 10 pineapples each.

2nd way: 4 equal shares

$$20 \div 4 = 5$$

So, 20 pineapples can be arranged in 4 boxes containing 5 pineapples each.

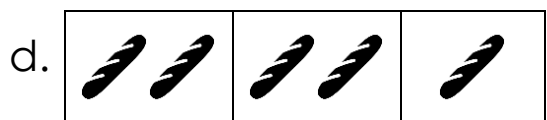
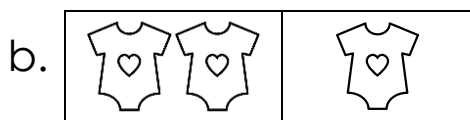
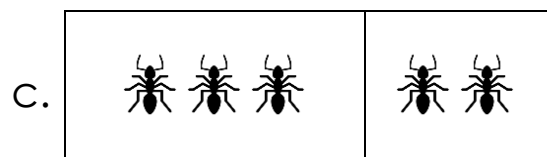
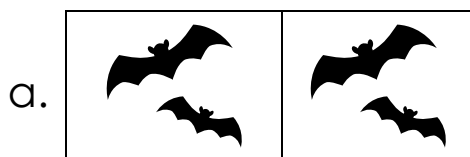


What's More

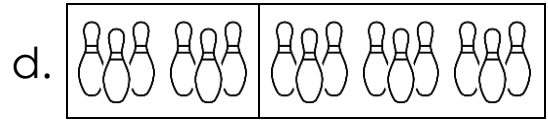
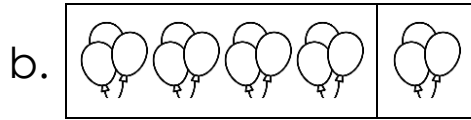
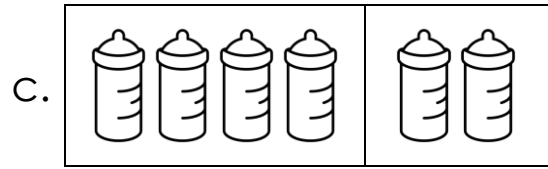
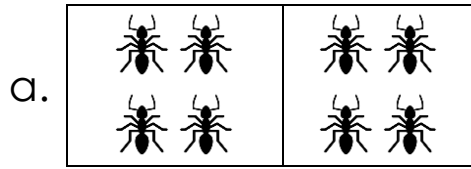
Great Job Kids! understanding equal sharing and grouping helps us solve real-life problems and work better together. Now, let's try some activities where you can practice using equal sharing in different ways. Are you ready?

Activity 1. Choose the **CORRECT** answer for the following questions. Encircle the letter of your correct answer.

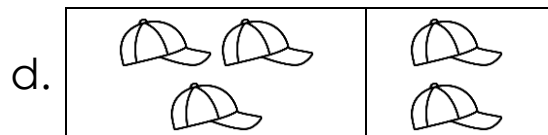
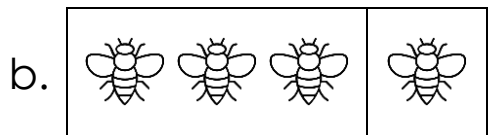
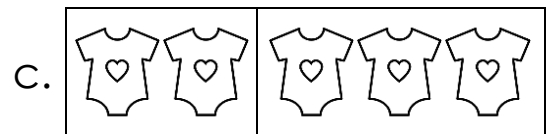
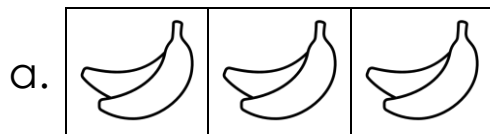
1. Which of the following objects is divided into 2?



2. Which of the following objects is divided into 4?



3. Which of the following objects is divided into 3?





What I have learned

What you have learned helps you organize tasks, manage time, and make sure everyone gets an equal share. Now, let's put your learning into practice with some fun activities! Are you ready?

Fill in the blanks of the following questions. Choose your answer provided inside the box below.

Equal Sharing/shares Equal Grouping
--

1. _____ is the division of a quantity or a set of items into smaller, equal portions.
2. In _____ we know the number being divided and the size of each group.
3. _____ is when objects can be done in many ways, depending on the number of shares or portions we want to create.



What I can do

Perfect everyone! with equal groupings it will helps you organize projects and activities in a fair way. Now, let's practice with some activities where you'll have the chance to divide things into equal parts and groups. Are you ready?

Directions: Draw more objects and divide them into groups. Count the number of groups, then complete the number sentence.

1. Draw 4 more hearts to make it 6 and group them into 2.



$$6 \div 2 = \underline{\quad}$$

2. Draw 3 more triangles to make it 8 and group them into 4.



$$8 \div 2 = \underline{\quad}$$

3. Draw 2 more squares to make it 4 and group them into 2.



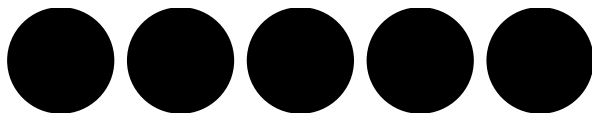
$$4 \div 2 = \underline{\quad}$$

4. Draw 4 more stars to make it 10 and group them into 2.



$$10 \div 5 = \underline{\hspace{2cm}}$$

5. Draw 5 more circles to make it 10 and group them into 5.



$$10 \div 2 = \underline{\hspace{2cm}}$$



Assessment

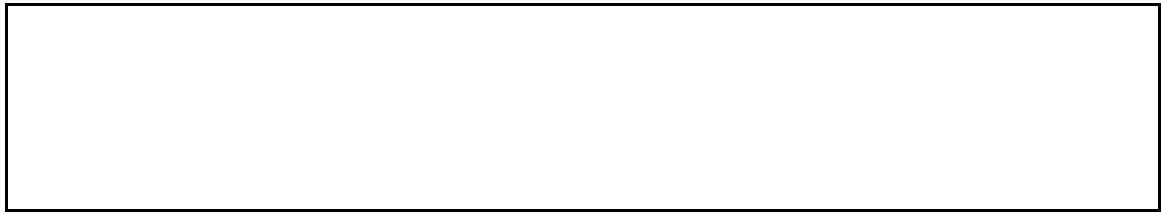
Before we jump into our activities, let's do a quick assessment to see what you already know about equal sharing and forming equal groups. Are you ready?

Directions: Based on the number given, draw and divide the objects into equal parts and write the number sentence.

1. Draw 6 flowers and group them into 3 equal parts.

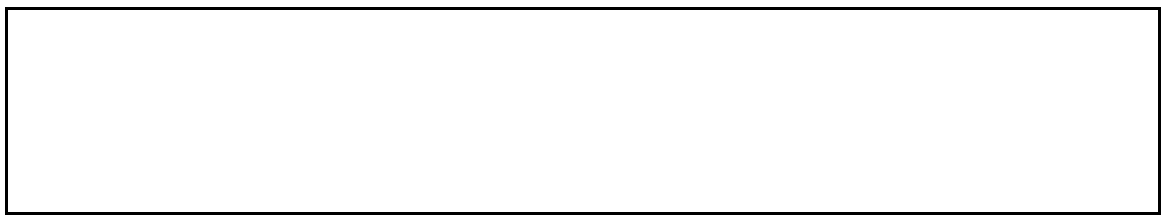
$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

2. Draw 8 bananas and group them into 4 equal parts.



$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

3. Draw 10 oranges and group them into 2 equal parts.



$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

4. Draw 4 guavas and group them into 2 equal parts.



$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

5. Draw 12 mangos and group them into 4 equal parts.



$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

Lesson 2 - Repeated Subtraction



What I Need to Know

Good day, Mathletes! In this module, you will gain understanding on how to illustrate and write division expressions using a variety of concrete and pictorial models and numerals, in modelling division as repeated subtraction. Remember! repeated subtraction allows you to use a skill that you are already familiar with. This gently introduces you to a new concept that might be difficult to understand at first.

At the end of this module, you are expected to:

1. understand the concept division as repeated subtraction; and
2. perform Division Using Repeated Subtraction.



What I Know

Before we begin our lesson today, what you know is that repeated subtraction can be useful when sharing things fairly. Now, let's move on to some activities to see how well you understand it. Are you ready?

Directions: Use repeated subtraction to solve the following division problem then, encircle the letter of the correct answer.

1. $10 \div 2 =$ _____

$10 - 2 =$ a. 4

$8 - 2 =$ b. 3

$6 - 2 =$ c. 5

$4 - 2 =$ d. 6

$2 - 2 =$

2. $16 \div 4 =$ _____

$16 - 4 =$ a. 4

$12 - 4 =$ b. 3

$8 - 4 =$ c. 5

$4 - 4 =$ d. 6

3. $15 \div 3 =$ _____

$15 - 3 =$ a. 4

$12 - 3 =$ b. 3

$9 - 3 =$ c. 5

$6 - 3 =$ d. 6

$3 - 3 =$

4. $8 \div 2 =$ _____

$8 - 2 =$

a. 4

$6 - 2 =$

b. 3

$4 - 2 =$

c. 5

$2 - 2 =$

d. 6

5. $25 \div 5 =$ _____

$25 - 5 =$

a. 4

$20 - 5 =$

b. 3

$15 - 5 =$

c. 5

$10 - 5 =$

d. 6

$5 - 5 =$



What's In

In the previous module, you have learned about Equal sharing or formation of equal groups of objects.

Directions: Based on the number given, draw and divide the objects into equal parts and write the number sentence.

1. Draw 4 umbrellas and group them into 2 equal parts.

_____ \div _____ = _____

2. Draw 6 pencils and group them into 3 equal parts.

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$

3. Draw 8 erasers and group them into 4 equal parts.

$$\underline{\hspace{2cm}} \div \underline{\hspace{2cm}} = \underline{\hspace{2cm}}$$



What's New

One method for teaching division is by **repeated subtraction**. It is the process of repeatedly deducting the same amount from a high number in order to get to zero. Division, or the process of subtracting an equal number of elements from a collection, is called repeated subtraction. This method involves continually subtracting the same number from a larger number until the remaining amount is equal to or less than the original number.

Here is an example: what is 35 divided by 5? You could use repeated subtraction to find out how many times you could take 5 away from 35 before hitting a number smaller than 8.

For example:

$$35 - 5 = 30$$

$$30 - 5 = 25$$

$$25 - 5 = 20$$

$$20 - 5 = 15$$

$$15 - 5 = 10$$

$$10 - 5 = 5$$

$$5 - 5 = 0$$

So the answer is 7.

Start out with 20 sticks.

Make one group of four. In your mind, “move it away” from the picture. Form another group of four. Again, “move it away”, or subtract it from the picture.

$$20 \div 4 = 5$$

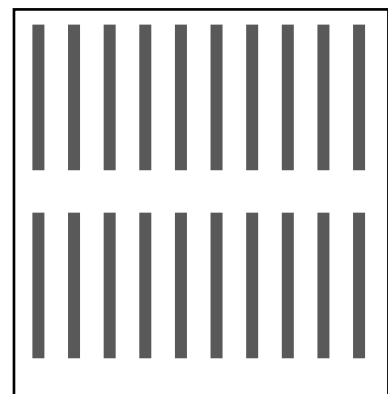
$$20 - 4 = 16$$

$$16 - 4 = 12$$

$$12 - 4 = 8$$

$$8 - 4 = 4$$

$$4 - 4 = 0$$



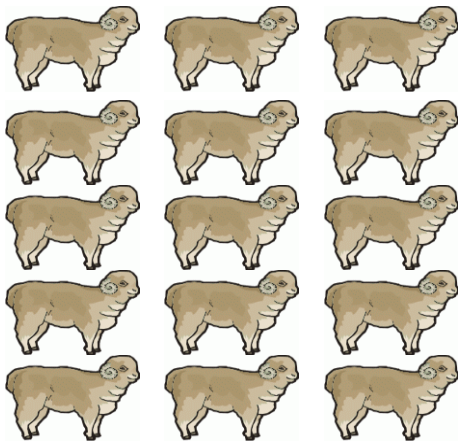
This is repeated subtraction. You subtract 4 repeatedly until you reach zero. Each subtraction is a group of 4.

How many groups? _____

How many times did you subtract? _____

That is the answer to the division problem $20 \div 4$.

Make groups, but in your mind 'move them away' or subtract. Write a subtraction sentence.



a. $15 \div 3$

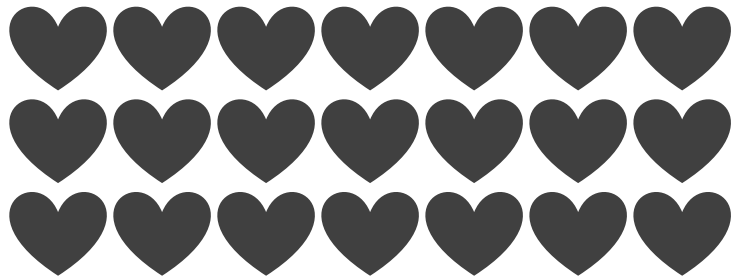
$15 - 3 = 12$

$12 - 3 = 9$

$9 - 3 = 6$

$6 - 3 = 3$

$3 - 3 = 0$



b. $21 \div 7$

$21 - 7 = 14$

$14 - 7 = 7$

$7 - 7 = 0$



What is It

Division can be solved by *repeated subtraction*.

$20 \div 4 = ?$ $20 - 4 - 4 - 4 - 4 - 4 = 0.$ I subtracted 4 five times, so $20 \div 4 = 5.$ $20 - 4 = 16$ $16 - 4 = 12$ $12 - 4 = 8$ $8 - 4 = 4$ $4 - 4 = 0$	$25 \div 5 = ?$ $\begin{array}{r} 25 \\ - 5 \\ \hline 20 \\ - 5 \\ \hline 15 \\ - 5 \\ \hline 10 \\ - 5 \\ \hline 5 \\ - 5 \\ \hline 0 \end{array}$ I subtracted 5 five times, so $25 \div 5 = 5.$	$20 \div 4 = ?$ $\begin{array}{r} 20 \\ - 4 \\ \hline 16 \\ - 4 \\ \hline 12 \\ - 4 \\ \hline 8 \\ - 4 \\ \hline 4 \\ - 4 \\ \hline 0 \end{array}$ I subtracted 4 four times, so $20 \div 4 = 5$
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Writing a subtraction sentence for each division sentence.

Examples:

1. $15 \div 5 = \underline{3}$
 $15 - 5 = 10$
 $10 - 5 = 5$
 $5 - 5 = 0$

2. $20 \div 4 = \underline{5}$
 $20 - 4 = 16$
 $16 - 4 = 12$
 $12 - 4 = 8$
 $8 - 4 = 4$
 $4 - 4 = 0$



What's More

Great Job Kids! did you know that we can use repeated subtraction to solve bigger division problems? repeated subtraction helps us with money, time, and even measuring things. Let's do some more practice problems to master it. Are you ready?

Activity 1. Write a subtraction sentence for each division sentence.

1. $30 \div 15$

30 -

2. $24 \div 4$

24 -

3. $18 \div 6$

18 -

4. $100 \div 10$

100 -

5. $27 \div 3$

27 -



What I have learned

Now that we've explored repeated subtraction, let's take a moment to reflect on what you have learned. Now, let's move on to some fun activities to apply what you've learned!

Directions: Answer carefully the following questions. Choose your answer provided inside the box below.

Division
Repeated subtraction

1. _____ is the process of repeatedly deducting the same amount from a high number in order to get to zero.
2. _____ is the process of subtracting an equal number of elements from a collection.



What I can do

Very Good Kids! What you can do is apply repeated subtraction in many ways. Now, let's try some exercises to practice even more. Ready?

Directions: Divide by repeated subtraction.

1. $12 \div 4 =$

2. $40 \div 10 =$

3. $35 \div 5 =$

4. $80 \div 20 =$

5. $18 \div 3 =$



Assessment

Now that we've learned about repeated subtraction, let's check your understanding with a quick assessment. Are you ready to see how much you've learned?

Directions: Divide the problem using repeated subtraction.

1. $25 \div 5$

25 –

2. $36 \div 6$

36 –

3. $16 \div 8$

16 –

4. $28 \div 4$

28 –

5. $20 \div 5$

20 –



Additional Activities

Perfect! Keep practicing, and you'll become a master at repeated subtraction. Let's do a few more exercises together!

Directions: Use repeated subtraction to fill in the boxes.

1. $30 \div 10$

$$\begin{array}{r} 30 - 10 = \boxed{} \\ \boxed{} - 10 = \boxed{} \\ 10 - = 0 \end{array}$$

2. $12 \div 4$

$$\begin{array}{r} 12 - 4 = \boxed{} \\ 8 - \boxed{} = \boxed{} \\ 4 - 4 = 0 \end{array}$$

3. $18 \div 6$

$$\begin{array}{r} 18 - 6 = \boxed{} \\ \boxed{} - 6 = 6 \\ 6 - 6 = \boxed{} \end{array}$$

4. $25 \div 5$

$$25 - 5 = \square$$

$$20 - 5 = 15$$

$$15 - 5 = \square$$

$$10 - 5 = 5$$

$$5 - 5 = \square$$

5. $40 \div 10$

$$40 - 10 = \square$$

$$30 - \square = 20$$

$$20 - 10 = \square$$

$$10 - 10 = 0$$

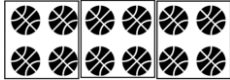




Answer Key

Lesson 1

What I Know

1. 2
2. 5
3. 4

What's In

1. 
2. 
3. 
4. 
5. 

What's More

Activity 1

1. a
2. a
3. a

What I have Learned

1. Equal sharing
2. Equal grouping
3. Equal shares

What I can Do

(Drawing must be checked by the teacher)

1. 3
2. 4
3. 2
4. 2
5. 5

Assessment

1. $6 \div 2 = 3$
2. $8 \div 2 = 4$
3. $10 \div 2 = 5$
4. $4 \div 2 = 2$
5. $12 \div 3 = 4$

Lesson 2

What I Know

1. 8, 6, 4, 2, 0 - c
2. 12, 8, 4, 0 - a
3. 12, 9, 6, 3, 0 - c
4. 6, 4, 2, 0 - a
5. 20, 15, 10, 5, 0 - c

What's More

1. $30 - 15 = 15$
2. $24 - 4 = 20$
3. $18 - 6 = 12$
4. $100 - 10 = 90$
5. $27 - 3 = 24$

What I have Learned

1. Repeated subtraction
2. Division

What I can Do

1. $12 - 4 = 8$
2. $40 - 10 = 30$
3. $35 - 5 = 30$
4. $80 - 20 = 60$
5. $18 - 3 = 15$

Assessment

1. $25 - 5 = 20$
2. $36 - 6 = 30$
3. $16 - 8 = 8$
4. $28 - 4 = 24$
5. $20 - 5 = 15$

Additional Activities

1. $30 \div 10 = 3$
2. $12 \div 4 = 3$
3. $18 \div 6 = 3$
4. $25 \div 5 = 5$

What's In

1. $4 \div 2 = 2$
2. $6 \div 2 = 3$
3. $8 \div 2 = 4$

Bibliography

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DISCLAIMER

This Self-learning Module (SLM) in **MATHEMATICS 2 Quarter 3 Module 6** titled **“Illustrate and write division expressions using a variety of concrete and pictorial models and numerals**Error! Reference source not found.” was developed by SDO Tacurong with the primary objective of preparing for and addressing the demands of the MATATAG Curriculum. Contents of this module were based on DepEd's Learning Competencies anchored on the MATATAG Curriculum. This is a supplementary material to be used by all learners of Tacurong City in all public schools beginning SY 2024-2025. The process of LR development was observed in the production of this module. This is version **1.0**. We highly encourage feedback, comments, and recommendations.

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