

Mathematics

Quarter 1 - Module 18: Week 10

Representing and Explaining MDAS



Mathematics – Grade 4
Alternative Delivery Mode
Quarter 1 - Module 18: Representing and Explaining MDAS
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Quarter 1 - Module 18: Week 10

Representing and Explaining MDAS

This instructional material was collaboratively developed and reviewed by educators in the public schools. We encourage teachers and other education stakeholders to email their feedback, comments, and recommendations to the Department of Education at region10@deped.gov.ph.

We value your feedback and recommendations.

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What This Module is About

This module is a great help for you to learn and understand the fundamental operations of Mathematics, addition, subtraction, multiplication, and division.

This contains activities that will enhance your knowledge and skills to visualize and understand the meaning of these operations and how to work on problems involving series of operations.

You can do it by yourself or your parents, brothers or sisters. But of course, your teacher is always there ready to help you.



What I Need to Know

In this module you are expected to learn the following:











1. Represent Multiplication, Division, Addition and Subtraction (MDAS) correctly.
2. Explain Represent Multiplication, Division, Addition and Subtraction (MDAS).

How to Learn from this Module

For you to achieve the objectives cited above, you are to do the following:

- Take your time reading the lessons carefully.
- Follow the directions and/or instructions in the activities and exercises diligently.
- Answer all the given tests and exercises.

Icons of this Module

	What I Need to Know	This part contains learning objectives that are set for you to learn as you go along the module.
	What I Know	This is an assessment as to your level of knowledge to the subject matter at hand, meant specifically to gauge prior related knowledge.
	What's In	This part connects previous lessons with that of what you are going to learn.
	What's New	An introduction of the new lesson through various activities, before it will be presented to you.
	What is It	These are discussions of the activities as a way to deepen your discovery and understanding of the concept.
	What's More	These are follow-up activities that are intended for you to practice further in order to master the competencies.
	What I Have Learned	Activities designed to process what you have learned from the lesson
	What I Can Do	These are tasks designed to showcase your skills and knowledge gained, and applied into real-life concerns and situations.
	Post Assessment	This assessment evaluates your level of mastery in achieving the learning objectives.
	More Activities	These are additional activities designed to increase the level of your skills and knowledge.



What I Know

Direction: Find the value of each of the following:

1. $7 \times 8 + 10 =$ _____

2. $36 - 8 \times 4 =$ _____

3. $10 \div 5 + 8 =$ _____

4. $48 \div 6 \times 7 =$ _____

5. $14 + 6 \div 2 =$ _____

6. $26 + 8 \times 3 =$ _____

7. $54 + 8 \times 4 =$ _____

8. $8 + 8 \times 6 =$ _____

9. $8 \times 3 - 6 =$ _____

10. $6 \times 5 + 5 =$ _____

Lesson

1

Representing and Explaining MDAS



What's In

Read the problem below. Read and answer the questions in **BOX A**. Select the correct answers in **BOX B**.

There are 520 boys and 530 girls who like to join the *Alay Lakad*. How many buses will be hired if 50 persons can be accommodated in a bus?

BOX A

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

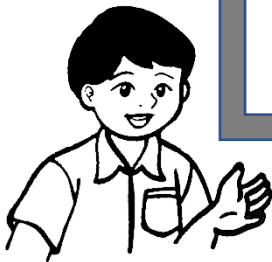
BOX B

- a. 520 boys and 530 girls, 50 persons
- b. Addition and Division
- c. 21 buses will be hired
- d. $(520 + 530) \div 50 = N$
- e. Number of buses to be hired



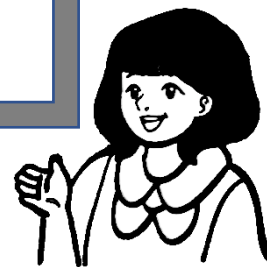
What's New

Mrs. Liza Castro asked two pupils, Leo and Mica to answer the exercises. They came up with the following solutions.



$$\begin{aligned}7 + 8 \times 2 \\= 15 \times 2 \\= 30\end{aligned}$$

$$\begin{aligned}8 + 7 \times 2 \\= 8 + 14 \\= 22\end{aligned}$$



Leo used addition first to get 30. On the other hand, Mica used multiplication first, so she got 22. Who has the correct answer? Why?

Mica has the correct answer. She followed the MDAS rule. Mica multiplied first 7×2 and then added 8 that makes the answer 22.



What is It

The order by which the operations are computed makes a difference. In general, multiplication and division should precede addition and subtraction.

This is the **MDAS** rule:

M ultiplication	Multiplication or division should be done, whichever comes first.
D ivision	
A ddition	Next, addition or subtraction should be
S ubtraction	done whichever comes first.

Bear in Mind

- When performing a series of operations:
1. Do multiplication or division first from left to right.
 2. Then do addition or subtraction from left to right.

Example:

$$\begin{array}{r} 4 \div 4 + 8 \\ 1 + 8 \\ 9 \end{array}$$

So, $4 \div 4 + 8 = 9$



What's More

Direction: Answer the items below. Follow the MDAS rule.

1. $42 \div 6 - 4 =$

6. $8 \times 6 + 9 =$

2. $3 \times 7 + 9 =$

7. $21 \div 3 \times 15 =$

3. $22 - 6 + 8 =$

8. $7 + 85 - 72 =$

4. $39 \div 3 \times 6 =$

9. $82 - 6 + 7 =$

5. $45 \div 5 + 9 =$

10. $76 + 8 - 31 =$



What I Have Learned

1. What does MDAS stands for?
2. Give the rules for solving problems involving the 4 operations multiplication, division, addition and subtraction.

Solve the following using the MDAS:

3. $9 + 8 \times 4 - 12 =$ _____

4. $25 - 10 \div 5 + 7 =$ _____

5. $8 - 4 \times 2 =$ _____

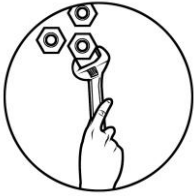
6. $48 + 6 - 4 =$ _____

7. $7 \times 9 + 5 =$ _____

8. $22 - 6 + 9 =$ _____

9. $66 \div 3 \times 6 =$ _____

10. $25 \div 5 + 86 =$ _____



What I Can Do

- A.** Match the number sentence in column A with the answer in column B.
B. Write the letter of your choice on the blank provided in Column A.

Column A

_____ 1. $42 \div 6 + 10$

_____ 2. $5 \times 6 + 9$

_____ 3. $36 \div 3 + 7$

_____ 4. $64 \times 6 - 3$

_____ 5. $8 \times 6 - 5$

Column B

a. 19

b. 381

c. 43

d. 17

e. 39

- B.** Using the digits 5, 6, 7, and 8 fill in the boxes below to make the equation true.

$$\square \times \square - \square + \square = 39$$



Post Assessment

Direction: Use MDAS to solve each of the following:

1. $8 \times 8 + 10 =$

2. $18 \div 3 \times 22 =$

3. $8 + 83 - 70 =$

4. $76 \times 5 - 9 =$

5. $6 \times 6 \div 4 =$

6. $12 + 7 - 3 =$

7. $28 - 12 \div 2 =$

8. $8 \times 4 - 16 =$

9. $7 \times 6 + 4 - 2 =$

10. $30 - 10 \div 5 + 9 =$



Additional Activities

Direction: Solve the following using MDAS operation.

1. $20 \div 5 \times 9 =$ _____

2. $75 - 25 + 8 =$ _____

3. $36 \div 4 + 7 =$ _____

4. $7 \times 9 - 3 =$ _____

5. $25 \div 5 \times 6 - 6 =$ _____

6. $33 \times 11 - 28 =$ _____

7. $55 \div 5 + 54 =$ _____

8. $87 - 18 + 23 =$ _____

9. $9 \times 8 - 21 =$ _____

10. $56 \times 4 - 34 =$ _____



Answer Key

What I Know
1. 66
2. 4
3. 10
4. 56
5. 17
6. 50
7. 86
8. 56
9. 18
10. 35

What's More
1. 3
2. 30
3. 24
4. 78
5. 18
6. 57
7. 105
8. 20
9. 83
10. 53

What I have Learned	1. Multiplication, Division, Addition, Division	2. Do multiplication or division first from left to right. Then do addition or subtraction from left to right.	3. 29	4. 30	5. 0	6. 50	7. 68	8. 25	9. 132	10. 91
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What I can Do	1. d	2. e	3. a	4. b	5. c
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Post Assessment	1. 74	2. 132	3. 21	4. 371	5. 9	6. 16	7. 22	8. 16	9. 44	10. 37
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Additional Activities	1.36
	2.58
	3.16
	4.60
	5.24
	6.335
	7.65
	8.92
	9.51
	10.190

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