THIRD TERM
WEEKLY LESSON NOTES
WEEK 1

Week Ending: 30-06-2023	DAY:		Subject: Mathematics
Duration: 60MINS			Strand: Number
Class: B8	Class Size:		Sub Strand: Multiplying & Dividing Fractions
Content Standard: B8.1.3.1 Apply the understanding of operation on fractions to solve problems involving fractions of given quantities and round the results to given decimal and significant places.	Indicator: B8.1.3.1.2 Multiplying & Dividing given fractions, by using the principle of the order of operations and apply the understanding to solve problems		Lesson: 1 of 1
Performance Indicator: Learners can multiplying & Dividing given fractions		Core Competencies: Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 102			

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Engage learners in simple brain teaser. Example: I have GH₵200, and I want to give half of it to my son for transport. How much will I give to my son? Learners in pairs discuss the question and find the answer. Ask them to share their answers with the class. Share performance indicators and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Guide learners to use the order of operations (BODMAS or PEDMAS) to simplify whole number expressions with more than two operations. Have learners understand the meaning of PEDMAS as Parenthesis, Exponents, Multiply/Divide (going from left to right), Add/Subtract (going from left to right). Write this question on the board. i. 21 ÷ 3 + (3 × 9) × 9 + 5. Learners in pairs solve it using the PEDMAS principle and present their solutions to the class. Solution Parentheses: We do not have any parentheses in this expression, so we move to the next step. Exponents: We do not have any exponents in this expression, so we move to the next step. Multiplication and Division: We have multiplication and division in this expression, and we must perform them from left to right. So, first we perform 3 × 9, which is 27. Then, we perform 27 × 9, which is 243. Finally, we perform 21 ÷ 3, which is 7.	Counters, bundle and loose straws base ten cut square, Bundle of sticks

The expression now becomes:

7 + 243 + 5

Addition and Subtraction: We have addition in this expression, so we add 7, 243, and 5 to get the final answer:
7 + 243 + 5 = 255

Therefore, 21 ÷ 3 + (3 × 9) × 9 + 5 equals 255.

Write another question on the board and have learners solve in groups. 18 ÷ 6 × (4 - 3) + 6. Learners solve using the BODMAS principle.

<u>Solution</u>
Brackets: We have a bracket in this expression, so we must perform the operation inside it first. 4 - 3 equals 1.
The expression now becomes:
18 ÷ 6 × 1 + 6

Division: We have division in this expression, so we must perform it next. 18 ÷ 6 equals 3.
The expression now becomes:

3 × 1 + 6

Multiplication: We have multiplication in this expression, so we must perform it next. 3 × 1 equals 3.
The expression now becomes:

3 + 6

Addition: We have addition in this expression, so we must perform it next. 3 + 6 equals 9.

Therefore, 18 ÷ 6 × (4 - 3) + 6 equals 9.

<u>Assessment</u>
Solve the following using the PEDMAS OR BODMAS principle.
i. 21 ÷ 3 + (3 × 9) × 9 + 5
ii. 18 ÷ 6 × (4 - 3) + 6
iii. 34 ÷ 9 + 40 − 23 × 32 ÷ 9

Through illustrations, guide learners to use the order of operations (BODMAS or PEDMAS) to simplify whole number expressions with more than two operations.

<u>STEPS</u>
- Begin by identifying any operations that are enclosed in brackets or parentheses. Simplify these operations first, starting with the innermost set of brackets and working outward. If there are nested brackets, work from the innermost to the outermost brackets.

	• If there are any exponents (powers or roots), perform these operations next, from left to right. • Next, perform any multiplication or division operations from left to right, whichever comes first in the expression. • Finally, perform any addition or subtraction operations from left to right, whichever comes first in the expression. Example; Simplify the expression: 5 + 3 × 4 ÷ 2 - 1 There are no operations in brackets or parentheses, so we move on to the next step. There are no exponents, so we move on to the next step. We perform the multiplication and division operations from left to right. 3 × 4 equals 12, and 12 ÷ 2 equals 6. The expression now becomes: 5 + 6 – 1 We perform the addition and subtraction operations from left to right. 5 + 6 equals 11, and 11 - 1 equals 10. Therefore, 5 + 3 × 4 ÷ 2 - 1 equals 10. Write this question on the board and have learners work it out in pairs. $\frac{2}{4} + \frac{5}{8} * \frac{4}{5} - \frac{1}{6}$ <u>Solution</u> = 1/2 + (5/8 * 4/5) - 1/6 (multiplication first) = 1/2 + (20/40) - 1/6 (simplify 5/8 * 4/5 = 20/40) = 1/2 + 1/2 - 1/6 (simplify 20/40 = 1/2) = 3/2 - 1/6 (addition/subtraction from left to right) = (9/6) - (1/6) (convert 3/2 to a fraction with a common denominator) = 8/6 (subtract 1/6 from 9/6) = 4/3 (simplify 8/6 to lowest terms) Therefore, the solution is 4/3. <u>Assessment</u> Solve the following 1. $\frac{3}{4} \div \frac{3}{8} + (\frac{4}{5} - \frac{1}{2})$ 2. $(\frac{3}{4} + \frac{5}{8}) * \frac{4}{11} - \frac{1}{2}$	
PHASE 3: **REFLECTION**	Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson. Take feedback from learners and summarize the lesson.	

Week Ending: 30-06-2023	DAY:		Subject: Mathematics	
Duration: 60MINS			Strand: Number	
Class: B8		Class Size:	Sub Strand: Fractions	
Content Standard: B8.1.3.1 Apply the understanding of operation on fractions to solve problems involving fractions of given quantities and round the results to given decimal and significant places.		Indicator: B8.1.3.1.3. Review word problems involving basic operations on fractions and related concepts.		Lesson: 1 of 1
Performance Indicator: Learners can review fractions and solve problems involving basic operations on fractions			Core Competencies: Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 102				

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Let learners determine the missing number in the box 	1	2	3
5	7	9	Answer: 43 | 15	18	21
35	39	?	 Share performance indicators and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Revise with learners the steps involved in solving word problems involving basic operations on fractions. Steps • Read the problem carefully and identify the important information. Pay attention to the quantities, units, and any keywords or phrases that indicate what operation you need to perform. • Write down what you know and what you need to find. Use variables to represent unknown quantities if necessary. • Decide which operation to use based on the problem. For example, if the problem involves finding a fraction of a whole number, you might use multiplication of fractions. If the problem involves dividing a fraction by another fraction, you might use division of fractions. • Perform the operation and simplify the answer if possible. Remember to follow the rules for adding, subtracting, multiplying, and dividing fractions. Write an example on the board and have learners work in pairs. Jane has 2/3 of a pizza left. If she divides it equally among herself and two friends, how much pizza will each person get? Solution: To divide the pizza equally among three people, we need to find 2/3 ÷ 3. Using division of fractions, we get (2/3) ÷ (3/1) = 2/9.	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Therefore, each person will get 2/9 of the pizza. If it takes 3/4 of an hour to drive 30 miles, how long will it take to drive 45 miles? Solution: We can use a proportion to solve this problem. Let x be the number of hours it takes to drive 45 miles. Then, we have the proportion: 3/4 = 30/x. Cross-multiplying, we get 3x = 120, which means x = 40 minutes or 2/3 of an hour. A recipe calls for 3/4 cup of sugar to make 12 cookies. How much sugar is needed to make 36 cookies? Solution: To make 36 cookies, we need to triple the recipe. So, we need to triple both the amount of sugar and the number of cookies. 3/4 cup of sugar for 12 cookies is equivalent to (3/4) ÷ (12/12) = 1/4 cup of sugar per cookie. Therefore, to make 36 cookies, we need (1/4) x 36 = 9 cups of sugar. Assessment i. Faako answers 42 out of 60 questions correctly. What percentage of her answers are correct? Solution Percentage of correct answers = (Number of correct answers / Total number of questions) x 100 In this case, Faako answered 42 out of 60 questions correctly, so: Percentage of correct answers = (42 / 60) x 100 Percentage of correct answers = 0.7 x 100 Percentage of correct answers = 70% Therefore, Faako answered 70% of the questions correctly. ii. John ran 2/3 of a mile in 4 minutes. At the same pace, how long will it take him to run 1 mile?	
PHASE 3: **REFLECTION**	Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson. Take feedback from learners and summarize the lesson.	