FIRST TERM
WEEKLY LESSON NOTES
WEEK 8

Week Ending: 03-03-2023	**DAY:**	**Subject:** Mathematics	
Duration: 60MINS		**Strand:** Number	
Class: B8	**Class Size:**	**Sub Strand:** Decimals	
Content Standard: B8.1.2.2 Apply the understanding of the addition and subtraction to solve problems and round answers to given decimal places.	**Indicator:** B8.1.2.2.3. Create and solve story problems involving decimals on the four basic operations	**Lesson:** 1 of 2	
Performance Indicator: Learners can solve story problems involving decimals on the four basic operations.	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)		
References: Mathematics Curriculum Pg. 98			

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Revise with learners on the previous lesson. Share performance indicators with learners and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Guide learners to create and solve story problems involving decimals on the four basic operations using the following steps. 1. Read the problem carefully: Make sure you understand the problem by reading it carefully, identifying the information given, and determining what the problem is asking for. 2. Identify the operation: Determine which of the four basic operations (addition, subtraction, multiplication, or division) you need to use to solve the problem. 3. Convert the decimals: If necessary, convert any mixed numbers or fractions to decimals. You can do this by dividing the numerator by the denominator. 4. Align the decimals: When performing addition or subtraction, align the decimals so that the decimal points are lined up vertically. 5. Perform the operation: Perform the operation using the appropriate algorithm. If you're not sure, review the steps for each operation. 6. Check your answer: Check your answer by re-reading the problem and making sure it makes sense. Also, check your calculations to make sure they're correct. Examples: (i) Kofi bought 8 notebooks at GH₵ 12.00 each. Ama bought 12 pens at GH₵ 5.00 each. How much altogether they spend on the items.	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Solution Kofis notebooks = 8 x 12 = 96 Amas pens = 12 x 5 = 60 Altogether = GH₵ 96 + GH₵ 60 = GH₵156.00 Assessment (i) A man gave an amount of GH₵ 2477.25 to be shared equally among his three children. How much did each receive? (ii) On Adwoa's birthday, the father bought her a pack of chocolate containing 250 bars. If Adwoa took 90 bars of the chocolates and gave the rest to her four friends to share equally, how many bars of chocolates did each receive? (iii) Mrs Yaboi bought 25.25 metres of cloth for her five children. If they share the material equally, how many metres of cloth did each receive?	
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: 03-03-2023	**DAY:**	**Subject:** Mathematics
Duration: 60MINS		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Indices

Content Standard: B8.1.2.3 Demonstrate understanding and the use of the laws of indices in solving problems (including real life problems) involving powers of natural numbers	**Indicator:** B8.1.2.3.1 Identify and explain the laws of indices and apply the laws of indices to simplify and evaluate numbers involving powers of numbers.	**Lesson:** 2 of 2

Performance Indicator: Learners can identify and explain the laws of indices and apply the laws of indices to simplify and evaluate numbers involving powers of numbers	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)

References: Mathematics Curriculum Pg. 100

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Revise with learners on the previous lesson. Share performance indicators with learners and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Introduce the concept of indices: Begin by explaining what indices are and their basic properties. Explain that indices are a way of representing repeated multiplication, where the number being multiplied is called the base and the exponent tells us how many times to multiply the base by itself. Show students how to write a number in index form, and explain the meaning of the base and exponent. Teach the rules of indices: Once the students have a basic understanding of indices, teach them the rules that apply to working with indices. These include: ☐ Multiplying indices: When multiplying numbers with the same base, add their exponents. (first law) $a^m \times a^n = a^{m+n}$ example: simplify $3^2 \times 3^3 = 3^{2+3} = 3^5 = 243$ ☐ Dividing indices: When dividing numbers with the same base, subtract their exponents. (second law) $\frac{a^m}{a^n} = a^{m-n}$ or $a^m \div a^n = a^{m-n}$ Example: simplify $\frac{3^7}{3^3} = 3^{7-3} = 3^4 = 81$ ☐ Raising to a power: When raising a number to a power, multiply the exponent by the original exponent. (third law) $(a^m)^n = a^{m \times n} = a^{mn}$ Example: simplify $(2^3)^2 = 2^{3 \times 2} = 2^6 = 64$	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	☐ Negative indices: A number raised to a negative exponent is equal to 1 divided by the number raised to the positive exponent. $a^{-m} = \frac{1}{a^m}$ or $\frac{1}{a^n} = a^{-n}$ Example: simplify $5^{-2} = \frac{1}{5^2} = \frac{1}{25}$ <u>Assessment</u> If $2^x = 16$, what is the value of x? Simplify $3^2 \times 3^4$. If $5^{(a-1)} = 25$, what is the value of a? Evaluate $4^3 \div 2^2$. Write 81 as a power of 3. Simplify $(2^3 \times 3^4) \div (2^2 \times 3^2)$. Write $5^4 \times 5^2$ in index form. If $4^b = \frac{1}{64}$, what is the value of b? Evaluate $(10^3 \div 10^2) \times (10^5 \div 10^3)$. Write $\frac{1}{16}$ as a power of 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.	