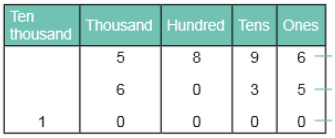
FIRST TERM
WEEKLY LESSON NOTES
WEEK 1

Week Ending:	**DAY:**	**Subject:** Mathematics	
Duration:		**Strand:** Number	
Class: B8	**Class Size:**	**Sub Strand:** Read And Write In Number Quantities	
Content Standard: B8.1.1.1 Demonstrate understanding and the use of place value for expressing quantities in standard form and rounding numbers.	**Indicator:** B8.1.1.1.1 Apply the understanding of place value to read and write in number quantities over 1,000,000,000.	**Lesson:** 1 of 1	
Performance Indicator: Learners can read and write in number quantities over 1,000,000,000.		**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 90			

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Play:"1 more than". Mention a number and learners add 1 to it and call out the number e.g. 1) 6 →7 2) 15 → 16 3) 30 → 31 4) 88 → 89 • *Did you have fun playing the game?* • *What set of numbers did you hear in the song?* • *Write 1 to 20 in your books.* Share performance indicators and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Have learners look at the multi-based block and write the number name for each. 1) One thousand 2) Five thousand 3) Sixty 4) Four Draw the Place Value Chart on the board Have learners be in groups of five. Write these numbers on the board. Learners read it and write the numerals under the appropriate columns: 1, 2 4 6. And 3, 6 0 4 Give out the place value chart to learners. They write numeral on their own and write it under the appropriate column in the place value chart. In pairs, let learners write the number name for these numerals. 1) 645 2) 1,332 3) 2,408,321	Counters, bundle and loose straws base ten cut square, Bundle of sticks

Ten thousand	Thousand	Hundred	Tens	Ones
1	2	4	6	
3	6	0	4	

	In groups of five, give out the Place Value Chart. Write these numerals on the board for learners to write them in the chart. 1) 5,896 2) 6,035 3) 10,000  Repeat this exercise. Learners write their own numerals and write number names for them. They should move round other groups and compare their work. Engage learners to work in pairs. Write number names for these numerals. 1) 5,648 2) 6,099 <u>Assessment</u> Write number names for these numerals. 1) 9,804 2) 10,024 3) 9,999 4) 1,567,451 Write the number names for these numerals. 1) 4,999 2) 4,005 3) 3,079 4) 1,567,451	
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.	

Ten thousand	Thousand	Hundred	Tens	Ones
	5	8	9	6
	6	0	3	5
1	0	0	0	0

Week Ending:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Read And Write In Number Quantities

Content Standard: B8.1.1.1 Demonstrate understanding and the use of place value for expressing quantities in standard form and rounding numbers and decimals to significant figures and a given number of decimal places	**Indicator:** B8.1.1.1.2. Skip count forwards and backwards in 10,000s, 100,000s, 500,000s, etc.	**Lesson:** 2 of 2

Performance Indicator: Learners can skip count forwards and backwards in 10,000s, 100,000s, 500,000s	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)
References: Mathematics Curriculum Pg. 90	

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Play: "How Many fingers up" and "How Many" fingers down? Hold up fingers on two hands. Say "How Many fingers up" and "How Many fingers down"? Learners call out the fingers they see up and the number of fingers they see down	
PHASE 2: **NEW LEARNING**	Revise counting forwards and backwards by 1000s and 10000s with the class. Put learners into groups of five. Give them 100000 number charts. Learners skip count in columns in 100000s starting on 200000,300000,400000,500000. The group leaders should identify errors or omissions and correct them. Give 1000 numeral cards to learners in their groups. They play counting forwards in 10s starting on 200000, 400000, 500000 etc. Deduce from learners a pattern or trend that they have identified when they were counting forwards in 10000's. Have learners work in pairs. Give them 10000 numeral charts. They skip count forwards in 10s starting from any number. Call out 10 learners to the front of the class. Make sure you cater for gender and social inclusiveness. Give each of them multiples of 10000 numeral cards. They hold from 100 – 10. Each learner reads his/her number. 100 90 80 70 60 50 40 30 20 10	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Give out the 100 numeral chart to learners in their groups. They skip count backwards by 10s starting from different numbers. Give them the 1000 numeral cards to repeat the same above. Give out 1000 numeral charts to learners, they skip count backwards by 100s from any number. Count backwards in 100,500s up to the fifth number. (I) 1,800,000, 1699500, 1599000, ... <u>Assessment</u> Give out 10000 numeral charts to learners. They skip count backwards from these numbers 1) 520 2) 802 3) 905 Give them 10000 numeral cards. They skip count forwards by 10000's starting from any number.	
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.	

Vetted By: …… Sign: ……

FIRST TERM
WEEKLY LESSON NOTES
WEEK 2

Week Ending:	**DAY:**	**Subject:** Mathematics	
Duration:		**Strand:** Number	
Class: B8	**Class Size:**	**Sub Strand:** Compare & Order Whole Numbers	
Content Standard: B8.1.1.1 Demonstrate understanding and the use of place value for expressing quantities in standard form and rounding numbers.	**Indicator:** B8.1.1.1.3. Compare and order whole numbers using ">, <, and ="	**Lesson:** 1 of 1	
Performance Indicator: Learners can compare and order whole numbers using ">, <, and ="		**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 90			

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Play: "10 more than". Mention a number and learners add 10 to it and call out the number. E.g. 1) 13 → 23 2) 40 → 50 3) 50 → 60 4) 90 → 100 Share performance indicators and introduce the lesson.	
PHASE 2: **NEW LEARNING**	E.g. 1 Identify numbers which are 100,000, 1500,000, etc. more or less than given 8 to 9-digit number. Put learners into groups of five. Write these numbers on the board and let them describe the relationship between them. 126,000 and 526,000. Have learners use the place values to determine the difference. Both numbers have numbers at the hundred thousand columns but 500,000 is a lot bigger than 100,000. So, 526,000 is a lot bigger than 126,000, and 126,000 is a lot smaller than 526,000. In their groups learners describe the relationship between these numbers 1) 648,000 and 230,000 2) 136,000 and 128,000. Justify your answers. Put leaners into groups of five. Write these numbers on the board 268,000 and 320,000.	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Have learners find the values of each digit. i.e. looking at the 2 numbers, 300,000 is greater than 200,000 so, 320,000 is greater than 268,000. Encourage learners to use the symbols. So, 320,000 > 268,000 and 268,000 < 320,000. <u>Assessment</u> Have learners work in pairs. Use the symbols >, = and < to compare these numbers. 1) 789,600 _____ 786900 2) 998900_____999800 3) 765000_____765000	
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. <u>Home Work</u> Use the symbols >, =, < to compare these numbers 1) 885600_____885600 2) 640000_____642000 3) 987200_____897200 4) 845600____854600	

Week Ending:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Standard Form

Content Standard: B8.1.1.1 Demonstrate understanding and the use of place value for expressing quantities in standard form and rounding numbers and decimals to significant figures and a given number of decimal places	**Indicator:** B8.1.1.1.4 Express integers of any size into standard form.	**Lesson:** 2 of 2

Performance Indicator: Learners can express integers of any size into standard form	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)

References: Mathematics Curriculum Pg. 91

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 write integers as a power of 10: $1 = 10^0$ $10 = 10^1$ $100 = 10^2$ $1000 = 10^3$ Guide learners to write multiples of 10 in standard form: (I) $10 = 1 \times 10$ (II) $100 = 1 \times 10^1$ (III) $1000 = 1 \times 10^3$ etc. Guide learners to write integers in standard form: (i) $26 = 2.6 \times 10$ (ii) $375 = 3.75 \times 10^2$ (iii) $8,765,049 = 8.765049 \times 10^6$ <u>Assessment</u> Write these integers in standard form 1. 234 2. 3456778 3. 97864064 4. 1234787	Counters, bundle and loose straws base ten cut square, Bundle of sticks
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.	

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FIRST TERM
WEEKLY LESSON NOTES
WEEK 3

Week Ending:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Significant Figures

Content Standard: B8.1.1.1 Demonstrate understanding and the use of place value for expressing quantities in standard form and rounding numbers.	**Indicator:** 8.1.1.1.5 Express integers in a given number of significant and decimal places	**Lesson:** 1 of 1

Performance Indicator: Learners can express integers in a given number of significant and decimal places	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)
References: Mathematics Curriculum Pg. 90	

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**	Revise with learners on place value of numbers. Guide learners to explain what a significant figure is. As you read a figure from left to right, the first value you come to that is not zero has the highest place value, so it is called the first significant figure (s.f.), For example, in the number 4078; 4 is the first significant figure, 0 is the second significant figure and so on... Also, in the number 0.00507; 5 is the first significant figure since it is the first non-zero figure reading from left to right. The 0 after 5 is the 2 significant figure and 7 is the 3" significant figure. To correct a number to a stated number of significant figures • find the last significant figure you want • then look at the next significant figure (to the right) • If this figure is less than 5 leave the last significant figure you want as it is If this figure is 5 or more add 1 to the last significant figure you want. Guide learners to express any given integer to a given number of significant figures. (i) Express 56734 correct to two significant figures. Solution a) The 2nd significant figure is 6 but the figure after it (i.e. the 3rd significant figure) is 7 which is more than 5. Therefore we add 1 to 6 to give 7 as the 2nd significant figure. 56734 = 57000 (to 2 significant figures) <u>Assessment</u>	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Express 975.8674, correct to (i) two decimal places; (ii) three decimal places	
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. <u>Home Work</u> Correct each of the following numbers to 2 significant figures. a) 0.0496 b) 0.0996	

Week Ending:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Standard Form

Content Standard: B8.1.1.1 Demonstrate understanding and the use of place value for expressing quantities in standard form and rounding numbers and decimals to significant figures and a given number of decimal places	**Indicator:** B8.1.1.1.4 Express integers of any size into standard form.	**Lesson:** 2 of 2

Performance Indicator: Learners can express integers of any size into standard form	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)

References: Mathematics Curriculum Pg. 91

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Start the lesson with a recap of the previous lesson. Allow learners to reflect on what they learnt from the previous lesson and the homework relating to significant. Learners work these examples in groups. Correct the following to; i) 4 ii) 3 iii) 2 iv) 1 • 17300 • 0.651234 • 782001 • 0.423568 • 20023 • 0.24780021 Share performance indicators with learners and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Brainstorm learners for meaning of standard form. It is a way of writing down very large or very small numbers easily. Guide learners to write numbers in standard form. $\underset{1\ and\ 10}{(a\ number\ between)} * \underset{of\ 10}{(an\ integer\ power)}$ Therefore a * 10^n is in the standard form, where 1≤ a < 10 and n is an integer. The value of n in the standard form shows whether the number is greater than 1 or is a fraction. Revise with learners to write integers as a power of 10: 1 = 10^0 10 = 10^1 100 =10^2 1000 = 10^3	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Guide learners to write multiples of 10 in standard form: (I) $10 = 1 \times 10$ (II) $100 = 1 \times 10^1$ (III) $1000 = 1 \times 10^3$ etc. Guide learners to write integers in standard form: Example 1: $26 = 2.6 \times 10$ 2.6×10 is in standard form but 26×10 is not in standard form because 26 is not between 1 and 10. Example 2: $375 = 3.75 \times 10^2$ 3.75×10^2 is in standard form but 37.5×10^2 is not in standard form because 37.5 is not between 1 and 10. Have learners practice in groups to write the following integers in standard form (i) 8,765,049 (ii) 872 (iii) 460000 Take learners through the rules of writing numbers in standard form. If n is positive, the number is 10 or more. Example $4.6 \times 10^6 = 460000$ if n is zero, the number is between 1 and 10 example $5.6 \times 10^0 = 5.6$ if n is negative, the number is a fraction. Example: $3 \times 10^{-1} = 0.3$ <u>Assessment</u> Write these integers in standard form 1. 234 2. 0.03456778 3. 97864064 4. 0.0001234787	
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.	

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FIRST TERM
WEEKLY LESSON NOTES
WEEK 4

Week Ending:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Word Problems On Place Values

Content Standard: B8.1.1.1 Demonstrate understanding and the use of place value for expressing quantities in standard form and rounding numbers and decimals to significant figures and a given number of decimal places	**Indicator:** B8.1.1.1.6 Create and solve word or real-life problems on place values	**Lesson:** 1 of 1

Performance Indicator: Learners can solve word or real-life problems on place values	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)

References: Mathematics Curriculum Pg. 90

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**	Revise with learners on the basic operations used in mathematics. That is Addition, Subtraction, Multiplication and Division. Explain these basic operation with scenarios to aid learners understanding. Example 1: Last summer Jane earned GHc75.50 mowing lawns. From these earnings, she saved GHc2.50 more than she spent. How much money did Jane save? <u>Solution</u> Since Jane made GHc75.50, choose a reasonable guess for the amount of money spent, such as GHc30.00. Make a table and compute the amount saved. Find the total to test your guess.	Counters, bundle and loose straws base ten cut square, Bundle of sticks

Spent	30.00	37.00	36.50
Saved	32.50	39.50	39.00
Total	62.50	76.50	75.50
Test	Too low	Too low	Correct

Jane saved GHc39.00.

Subtract the amount saved from the amount earned to see if GHc36.50 was spent.
GHc75.50 - GHc39.00 = GHc36.50
GHc39.00 – GHc36.50 = GHc2.50
The answer checks.

	Example 2: In a typical week, a chicken farmer collects about 1164 eggs each day. If all of the eggs are sent to the market, how many dozen eggs are sent each week? Solution First, to find how many eggs are collected in one week, multiply 7 days x 1164 eggs per day = $\frac{?}{eggs\ in\ one\ week}$ Then, to find how many dozen eggs are sent to the market each week, divide: $\frac{\text{Eggs collected in one week}}{\text{12 eggs}}$ = number of dozens sent to the market 1 4 2 1 1 6 4 × 7 8 1 4 8 eggs collected each week 6 7 9 ← dozen eggs sent to the market 12)8 1 4 8 −7 2 9 4 −8 4 1 0 8 −1 0 8 Each week 679 dozen eggs are sent to the market. Check your computations by using inverse operations. $8148 \div 7 \stackrel{?}{=} 1164$ Yes. $12 \times 679 \stackrel{?}{=} 8148$ Yes. Assessment Adom earns Gh₵2500 a month after tax and his elder brother Arko earns three times as much. How much is their total income after five years if there are no increases in their earnings?	
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:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Sets

Content Standard: B8.1.1.2 Identify perfect squares, determine their square root and solve real life problems involving union and intersection of two sets	**Indicator:** B8.1.1.2.1. Use the concept of sets to identify perfect squares and determine the square roots.	**Lesson:** 1 of 1
Performance Indicator: Learners can identify perfect squares and determine the square roots	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 91		

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 identify perfect squares or perfect numbers. Engage learners to list sets of multiples of numbers and identify a set of perfect numbers among them. In groups, learners list the first twelve multiples of the following (1) 5 (2) 2 (3) 4 5, 10, 15, 20, 25, 30, 35, 40, 45, 50, 55, … 2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24 … 4, 8, 12, 16, 20, 24, 28, 32, 36, 40, 44, 48… Guide learners on how to determine if a number is a perfect square. - By using repeated division of prime factors. Therefore the Perfect squares 4, 9, 16, 25, 36 Guide learners to use the knowledge on odd numbers to determine the square root of perfect numbers. (i) Determine the square root of 49. <u>Assessment</u> Which of the following numbers are perfect square? 40 64 676 50 4 36 73	Counters, bundle and loose straws base ten cut square, Bundle of sticks
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.	

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FIRST TERM
WEEKLY LESSON NOTES
WEEK 5

Week Ending:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Union & Intersection Of Sets

Content Standard: B8.1.1.2 Identify perfect squares, determine their square root and solve real life problems involving union and intersection of two sets	**Indicator:** B8.1.1.2.2. Use the knowledge on sets and sets of factors of numbers to solve real life problems involving union and intersection	**Lesson:** 1 of 1
Performance Indicator: Learners can use sets of factors of numbers to solve real life problems	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 93		

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**	Revise with learners on the meaning of factors of numbers. *A factor is a number that divides into another number exactly and without leaving a remainder.* Write this on the board. 2 x 3 = 6 Guide learners to identify 2 and 3 as factors and 6 as the product. Let learners understand that factors are also numbers that multiply together to get another number (product). In groups, learners list the factors of these numbers. 1) 6 2) 8 3) 10 Engage learners in different activities to find common factors of numbers. Example: 12 and 15 12 = {1,2,3,4,6,12} and 15= {1,3,5,15} Common factors = {1,3} Guide learners to explain and understand the concept of union and intersection of sets. The union of two sets is a set containing all the elements that are in A or in B. it has the symbol U. For example: A={1,2} and B= {2,3} So A U B = {1,2,3} Have learners note that, in writing the members for the union sets, numbers which are common in both sets are written once. Engage learners in different activities to introduce learners to intersection of sets.	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Assessment Guide learners to solve story and real-life problems involving union and intersection of sets (i) There are 80 farmers in a certain village who grow maize and rice or both. Out of the 80 farmers, 50 grow maize and 60 grow rice. (a) Represent the information on a Venn diagram. (b) If x of them grows both crops, write an equation in x and solve for it	
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:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Decimals

Content Standard: B8.1.2.1 Apply mental mathematics strategies and number properties used to solve problems	**Indicator:** B8.1.2.1.1 Multiply and divide by power of 10 including decimals and the benchmark fractions	**Lesson:** 1 of 1
Performance Indicator: Learners can multiply and divide by power of 10	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 94		

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**	In turns let learners recall multiplication facts up to 144 and related division facts. Recall decimal names of the benchmark fractions converted to decimals or percentages (and vice versa). Learners determine a product when a decimal number is a multiple by 10 <u>Assessment</u> Convert each of the following fractions to percentage. 1. $\frac{2}{5}$ 4. If 6 x 12 = ___ then ___ ÷ 12 = 6 2. $\frac{9}{10}$ 5. If 11x 7 = ___ then ___ ÷ 7 = 11 3. $\frac{7}{25}$ 6. If 8 x ___ = 72 then 72 ÷ ___ = 8	Counters, bundle and loose straws base ten cut square, Bundle of sticks
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.	

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FIRST TERM
WEEKLY LESSON NOTES
WEEK 6

Week Ending:	**DAY:**	**Subject:** Mathematics	
Duration:		**Strand:** Number	
Class: B8	**Class Size:**	**Sub Strand:** Mental Mathematics Strategies	
Content Standard: B8.1.2.1 Apply mental mathematics strategies and number properties used to solve problems	**Indicator:** B8.1.2.1.2 Apply mental mathematics strategies and number properties to do calculation		**Lesson:** 1 of 2
Performance Indicator: Learners can apply mental mathematics strategies and number properties to do calculation		**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 93			

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Revise with learners on the previous lesson. Play; "making **D**oubles". **C**all out a number and learners multiply it by 2 and call out the number. E.g. 1) 2→4 2) 10→20 3) 30→60 4) 100→200 Share performance indicators with learners and introduce the lesson.	
PHASE 2: **NEW LEARNING**	Guide learners to apply halving and doubling to determine the product given product of two given numbers. *In this strategy, we double one of the numbers to be multiplied and halve the other*. Write this sentence on the board. 84 x 5 =? Brainstorm learners to think of different strategies to solve the problem. Use the halving and doubling to determine the answer. 1. 84 x 5 = 24 x 10 = 240 So 84 x 5 = 240 Put learners into groups of five, write this sentence on the board 95 x 8 = ? Double 95 as 190, and halve 8 as 4. Now multiply 190 x 4 = 760 Explain to learners that it easier to double odd numbers and halve even numbers. E.g. 1) 125 x 20 → 250 x 10	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	2) 84 x 5 → 24 x 10 Put learners into groups of five. Use the halving and doubling to solve the following 1. 78 x 5 = ? 3. 200 x 14 =? 2. 124 x 3 = ? 4. 188 x 15 =? <u>Assessment</u> Apply halving and doubling to solve each of the following 1. 39 x 20 6. 266 x 5 2. 75 x 20 7. 300 x 5 3. 131 x 20 8. 226 x 15 4. 157 x 20 9. 250 x 13 5. 220 x 5 10. 420 x 20	
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:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Mental Mathematics Strategies

Content Standard:	**Indicator:**	**Lesson:**
B8.1.2.1 Apply mental mathematics strategies and number properties used to solve problems	B8.1.2.1.3 Apply mental mathematics strategies to solve word problems	2 of 2

Performance Indicator:	**Core Competencies:**
Learners can apply mental mathematics strategies and number properties to do calculation	Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)

References: Mathematics Curriculum Pg. 93

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**	Revise with learners the four basic operations. a. Addition: *Plus, add, find the sum, total, altogether.* b. Subtraction: *minus, subtract, take away, reduce, difference, decrease, deduct, etc.* c. Multiplication: *multiply, times, product, groups of, etc.* d. Division: *shared equally, divide, average, out of, etc.* Guide learners to apply the various mental strategies to solve some word problems. Put learners into groups of five, write this sentence on the board, what is 800g out of 1kg? Solution *1kg = 1000g* *So, 800g out of 1000g* = $\frac{800g}{1000g} = \frac{4}{5}$ *Therefore, 800g out of 1kg is* $\frac{4}{5}$ Dean bought a birthday card for $2.95. There was an additional $0.18 tax. Dean paid for his purchase using a $10 bill. How much change should Dean receive? Solution *Birthday card for $2.95* *Tax* *$0.18* *Total cost* *$3.13* *Amount paid – Total cost = change* *$10.00 - $3.13 = $6.87* *Hence, Dean should receive a change of $6.87* On Thursday, 30,861 people attended the baseball game. On Friday, 60,192 people attended. On Saturday 30,100 more people	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	attended the game than on Thursday. On which day did more people attend the baseball game: Friday or Saturday? Explain. <u>Solution</u> *Thursday = 30,861* *Saturday = 30,861 + 30,100 = 60,961* *Friday = 60,192.* *Which is greater = 60,961 > 60,192* *Therefore, more people (60,961) attended the baseball game on Saturday than on Friday (60,192)* Provide more opportunities for learners to use mental strategies, short methods and sundry tables to develop fluency in solving problems. <u>Assessment</u> • Henry has 898 pegs in each box. If there are 7 boxes, how many pegs does he have in total? • Dana worked for 7 hours on Thursday, 8 hours on Friday, and 4 hours on Saturday. She is scheduled to work 20 hours next week. How many hours did she work this week? • There are 375 audience tickets available for each taping of the Win It All game show. If 204 shows are taped each year, how many tickets are there in all?	
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.	

Vetted By: …… Sign: ……

FIRST TERM
WEEKLY LESSON NOTES
WEEK 7

Week Ending:	**DAY:**	**Subject:** Mathematics	
Duration:		**Strand:** Number	
Class: B8	**Class Size:**	**Sub Strand:** Addition & Subtraction	
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:** B8.1.2.2.1 Add and subtract more than four-digit numbers.		**Lesson:** 1 of 2
Performance Indicator: Learners can add and subtract more than four-digit numbers.		**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)	
References: Mathematics Curriculum Pg. 93			

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 use the partitioning (or expanded form) and place value system to add and subtract whole and decimal numbers. (i) Add 896854 and 76329 896854 = 800,000+90000+6000+800+50+4 + 76329 = 70000+6000+300+20+9 973183 = 900000+70000+3000+100+80+3 (ii) Add 3627.6 and 854.13 3627.60 = 3000+600 + 20 + 7 + $\frac{60}{100}$ + 854.13 = 800+50 +4 + $\frac{1}{10}$ + $\frac{3}{100}$ 3000+800 +600 + 20+ 50 + 7+ 4 + $\frac{60}{100}$ + $\frac{1}{10}$ + $\frac{3}{100}$ = 3000 + 1400 + 70+ 11+ $\frac{7}{10}$ + $\frac{3}{100}$ = 3000+(1000+400) + 70+ (10+1) + $\frac{70}{100}$ + $\frac{3}{100}$ 4481.73 = 4000+400+80+1+ $\frac{70}{100}$ (iii) Subtract 37.85 from 193.6 193.60 100 + 90 + 3+6 10+ 0 100	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	– = 37.85 - (30 + 7+ 85 100) $= 100 + 90 + 3 + \frac{60}{100} - 30\text{-}7 - \frac{85}{100}$ $= 100 + 90 - 30 + 3 - 7 + \frac{60}{100} - \frac{85}{100}$ $= 100 + 60 - 7 + 3 + \frac{60}{100} - \frac{85}{100}$ $= 100 + 53 + 2 + \frac{160}{100} - \frac{85}{100}$ 155.75 = 155 + 75 <u>Assessment</u> Use the partitioning and place system to add the following 1. 44362 and 53211 2. 54217 and 33521 3. 23888 and 46111 4. 634536 and 552124 5. 702702 and 282282 Apply the expanding and place system to add the following 1. 50342 + 643224 2. 48325 + 115037 3. 305306 + 420430 4. 511325 + 166341 5. 834256 + 221003	
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:	**DAY:**	**Subject:** Mathematics
Duration:		**Strand:** Number
Class: B8	**Class Size:**	**Sub Strand:** Multiplication & Division

Content Standard: B8.1.2.2 Apply the understanding of the Multiplication & Division to solve problems and round answers to given decimal places.	**Indicator:** B8.1.2.2.2 Multiply or divide multi-digit numbers by 2- and 3-digit numbers.	**Lesson:** 2 of 2

Performance Indicator: Learners can apply mental mathematics strategies and number properties to do calculation	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)

References: Mathematics Curriculum Pg. 95

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 use the area model (Expand and Box method) to multiply and divide efficiently. $526 \times 54 =$ 500 20 6 500×50 =25000 | 20×50 = 1000 | 6×50 = 300 | 50 500×4 = 2000 | 20×4 = 80 | 6×4 = 24 | 4 $\therefore 526 \times 54 = 25,000 + 2,000 + 1,000 + 300 + 80 + 24$ $= 28,404$ Guide learners to multiply whole numbers using the vertical place value method: (i.e. 657×27=) 657 x27 4599 + 1314 17739 Guide learners to multiply whole numbers using the lattice method. That is to solve 382 × 856: Make a 3 by 3 lattice and set up the solution as follows: 3 8 2 1 1 1 3 | 2 4 | 6 4 | 1 6 | 8 2 | 1 5 | 4 0 | 1 0 | 5 6 | 1 8 | 4 8 | 1 2 | 6 9 | 9 | 2	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	382 × 856 = 326,992 Guide learners to use the distributive property to multiply 325x 15 =325 x (10 + 5) = (325 x 10) + (325 x 5) =3,250 + 1,625 =4,875 Guide learners to investigate and determine basic division facts including divisibility test Guide learners to determine how a given number is divisible by 3,4,5, 6, 7, 8,9,10, etc. <u>Assessment</u> Multiply each of the following using the 'expand and box' method. 1. 4211 x 342 2. 3882 x 217 3. 5034 x 223 4. 5478 x 155 5. 6431 x 144 Solve the following using the vertical place value method 1. 442 x 42 2. 468 x 56 3. 356 x 37 4. 403 x 43 5. 650 x 29	
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.	

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FIRST TERM
WEEKLY LESSON NOTES
WEEK 8

Week Ending:	**DAY:**	**Subject:** Mathematics	
Duration:		**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:	**DAY:**	**Subject:** Mathematics
Duration:		**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.	

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FIRST TERM
WEEKLY LESSON NOTES
WEEK 9

Week Ending:	**DAY:**	**Subject:** Mathematics	
Duration:		**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 involving powers of natural numbers	**Indicator:** B8.1.2.3.2 Apply the laws of indices to simplify and evaluate numbers involving powers of numbers. (PEDMAS)		**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**	The laws of indices are a set of rules that govern how we can manipulate expressions involving powers of numbers. These rules are: 1. Product rule: $a^m * a^n = a^{(m+n)}$ This rule tells us that when we multiply two numbers with the same base, we can add their exponents to get the exponent of the result. Example: $2^3 \times 2^4 = 2^{(3+4)} = 2^7 = 128$ 2. Quotient rule: $a^m / a^n = a^{(m-n)}$ This rule tells us that when we divide two numbers with the same base, we can subtract their exponents to get the exponent of the result. Example: $5^8 / 5^3 = 5^{(8-3)} = 5^5 = 3125$ 3. Power rule: $(a^m)^n = a^{(m*n)}$ This rule tells us that when we raise a number to a power and then raise the result to another power, we can multiply the exponents to get the exponent of the final result. Example: $(3^4)^2 = 3^{(4*2)} = 3^8 = 6561$ 4. Negative exponent rule: $a^{(-m)} = 1/a^m$ This rule tells us that when we have a negative exponent, we can flip the base and make the exponent positive to get the reciprocal of the result. Example: $2^{-5} = 1/2^5 = 1/32$ 5. Zero exponent rule: $a^0 = 1$ This rule tells us that any number raised to the power of zero is equal to one. Example: $7^0 = 1$	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Using these rules, have learners simplify and evaluate expressions involving powers of numbers. Here are a few examples: Example 1: Simplify $4^3 * 4^5$ Using the product rule, we can add the exponents: $4^3 * 4^5 = 4^{(3+5)} = 4^8 = 65536$ <u>Assessment</u> 1. Using the power rule, Evaluate $(2^4)^3$ 2. Using the quotient rule, Simplify $3^5 / 3^2$ 3. Using the negative exponent rule, Simplify $5^{(-2)}$ 4. Using the zero exponent rule, Simplify 2^0	
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:	**DAY:**	**Subject:** Mathematics
Duration:		**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 involving powers of natural numbers	**Indicator:** B8.1.2.3.3-4 Solve exponential equations and Solve real life problems involving powers of natural numbers	**Lesson:** 2 of 2

Performance Indicator: Learners can solve exponential equations and solve real life problems involving powers of natural numbers	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)

References: Mathematics Curriculum Pg. 101

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 solve exponential equations and Solve real life problems involving powers of natural numbers 1. A person has a piece of land that is 50 meters long and 30 meters wide. How many square meters is the land? Solution: The area of the land is given by the product of its length and width, so we have: Area = 50 m x 30 m = 1500 m^2 Therefore, the land has an area of 1500 square meters. 2. A car travels at a speed of 60 km/h for 3 hours. How far does the car travel? Solution: The distance travelled by the car is given by the product of its speed and time, so we have: Distance = Speed x Time = 60 km/h x 3 h = 180 km Therefore, the car travels 180 kilometers. 3. A building has 10 floors, each with a height of 3 meters. How high is the building? Solution: The total height of the building is given by the product of the height of each floor and the number of floors, so we have: Height = 10 x 3 m = 30 m Therefore, the building is 30 meters high. 4. A recipe calls for 2 cups of flour, 1/2 cup of sugar, and 1/4 cup of butter. If you want to make twice the recipe, how much flour do you need? Solution: If we want to make twice the recipe, we need to double the amount of each ingredient. So we have: Flour = 2 cups x 2 = 4 cups Sugar = 1/2 cup x 2 = 1 cup Butter = 1/4 cup x 2 = 1/2 cup Therefore, we need 4 cups of flour to make twice the recipe. 5. A container of juice contains 1 liter of juice. If we pour 1/4 of the juice into a glass, how much juice is left in the container?	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Solution: If we pour 1/4 of the juice into a glass, we are left with 3/4 of the juice in the container. So we have: Juice left in container = 1 L x 3/4 = 0.75 L Therefore, there is 0.75 liters of juice left in the container	
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.	

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FIRST TERM
WEEKLY LESSON NOTES
WEEK 10

REVISION AND END OF TERM ASSESSMENT

Week Ending:	**DAY:**	**Subject:** Mathematics	
Duration:		**Strand:** Strands for the term	
Class: B8	**Class Size:**	**Sub Strand:** Sub strands for the term	
Content Standard: Demonstrate knowledge and understanding in the topics treated so far.	**Indicator:** Recall and summarize all what they have learnt within the term		**Lesson:** 1 of 2
Performance Indicator: Learners can recall and summarize all what they have learnt within the term		**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**	The laws of indices are a set of rules that govern how we can manipulate expressions involving powers of numbers. These rules are: 1. Product rule: $a^m * a^n = a^{(m+n)}$ This rule tells us that when we multiply two numbers with the same base, we can add their exponents to get the exponent of the result. Example: $2^3 \times 2^4 = 2^{(3+4)} = 2^7 = 128$ 2. Quotient rule: $a^m / a^n = a^{(m-n)}$ This rule tells us that when we divide two numbers with the same base, we can subtract their exponents to get the exponent of the result. Example: $5^8 / 5^3 = 5^{(8-3)} = 5^5 = 3125$ 3. Power rule: $(a^m)^n = a^{(m*n)}$ This rule tells us that when we raise a number to a power and then raise the result to another power, we can multiply the exponents to get the exponent of the final result. Example: $(3^4)^2 = 3^{(4*2)} = 3^8 = 6561$ 4. Negative exponent rule: $a^{(-m)} = 1/a^m$ This rule tells us that when we have a negative exponent, we can flip the base and make the exponent positive to get the reciprocal of the result. Example: $2^{-5} = 1/2^5 = 1/32$ 5. Zero exponent rule: $a^0 = 1$ This rule tells us that any number raised to the power of zero is equal to one. Example: $7^0 = 1$	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	Using these rules, have learners simplify and evaluate expressions involving powers of numbers. Here are a few examples: Example 1: Simplify $4^3 * 4^5$ Using the product rule, we can add the exponents: $4^3 * 4^5 = 4^{(3+5)} = 4^8 = 65536$ <u>Assessment</u> 1. Using the power rule, Evaluate $(2^4)^3$ 2. Using the quotient rule, Simplify $3^5 / 3^2$ 3. Using the negative exponent rule, Simplify $5^{(-2)}$ 4. Using the zero exponent rule, Simplify 2^0	
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:	**DAY:**	**Subject:** Mathematics	
Duration:		**Strand:** Strands treated for the term	
Class: B8	**Class Size:**	**Sub Strand:** Sub strands for the term	
Content Standard: Demonstrate knowledge and understanding in the topics treated so far.	**Indicator:** Preparation towards vacation		**Lesson:** 1 of 1
Performance Indicator: Learners can answer all end of term assessment questions in their exercise books.	**Core Competencies:** Communication and Collaboration (CC) Critical Thinking and Problem solving (CP)		
References: Mathematics Curriculum Pg. 101			

Phase/Duration	Learners Activities	Resources
PHASE 1: **STARTER**	Ask learners to bring and display all the materials needed for the assessment. Educate them on the consequences of examination mal practice.	Exercise books, pen, pencils, erasers, Answer sheets.
PHASE 2: **NEW LEARNING**	Engage learners to arrange themselves properly to sit for the assessment test. Mark learners answer sheets or exercise books. Fill in learner's SBA books and report cards. Distribute learners answer sheets or exercise books for feedback.	SBA, Assessment Questions and exercise books.

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