

WEEKLY LESSON PLAN – B7

WEEK 8

Date: 11 th March, 2022	Period:	Subject: Mathematics
Duration: 50mins		Strand: Number
Class: B7	Class Size:	Sub Strand: Number Operations
Content Standard: B7.1.2.3 Demonstrate understanding and the use of powers of natural numbers in solving problems	Indicator: B7.1.2.3.4 Find the value of a number written in index form.	Lesson:
Performance Indicator: Learners can find the value of a number written in index form		Core Competencies: CP I
References: Mathematics Curriculum Pg.15		
Keywords: prime numbers, prime factors,		
Phase/Duration	Learners Activities	Resources
PHASE 1: STARTER	Using blackboard illustrations, review learners understanding in the previous lesson. Share performance indicators and introduce the lesson.	
PHASE 2: NEW LEARNING	Revise with learners to list the factors of numbers on the board. Example: $27 = \{1, 3, 9, 27\}$ Ask a learners to describe prime numbers in his/her own words. Guide learners to distinguish between factors and prime factors of natural numbers. Engage learners to express a given number as a product of a given number or numbers. E.g. i. $32 = 2 \times 2 \times 2 \times 2 \times 2 = 2^5$ ii. $81 = 3 \times 3 \times 3 \times 3 = 3^4$ iii. $49 = 7 \times 7 = 7^2$ iv. $16 \times 27 = 2 \times 2 \times 2 \times 2 \times 3 \times 3 \times 3 = 2^4 \times 3^3$ Assist pupils to write a natural number as powers of a product of its prime factors. E.g. 72 You can find the prime factors by repeatedly diving by prime numbers. $72 = 2 \times 36$ $= 2 \times 2 \times 18$ $= 2 \times 2 \times 2 \times 9$ $= 2 \times 2 \times 2 \times 3 \times 3$ $= 2^3 \times 3^2$	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	<p>Guide learners to find the value of a number written in index form. Example: 5^3 Here we write out what the number means and work out the multiplication. $5^3 = 5 \times 5 \times 5 = 25 \times 5 = 125$</p> <p>E.g.2. find the value of 3^4 $3^4 = 3 \times 3 \times 3 \times 3 = 9 \times 9 = 81$</p> <p><u>Assessment</u> Express the following as a product of their prime factors 1) 180 2) 72 3) 81 4) 49 5) 16</p> <p>Find the value of 1) 10^5 2) 5^4 3) 9^3 4) 3^5 5) 7^2</p>	
<p>PHASE 3: REFLECTION</p>	<p>Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.</p> <p>Take feedback from learners and summarize the lesson.</p>	

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Duration: 50MINS		Strand: Number
Class: B7	Class Size:	Sub Strand: Number Operations
Content Standard: B7.1.2.3 Demonstrate understanding and the use of powers of natural numbers in solving problems	Indicator: B7.1.2.3.5 Apply the concept of powers of numbers (product of prime) to find Highest Common Factor (HCF).	Lesson:
Performance Indicator: Learners can find Highest Common Factors of numbers	Core Competencies: CP I	
References: Mathematics Curriculum Pg.15		
Keywords: prime numbers, prime factors,		

Phase/Duration	Learners Activities	Resources
PHASE 1: STARTER	Using blackboard illustrations, review learners understanding in the previous lesson. Share performance indicators and introduce the lesson.	
PHASE 2: NEW LEARNING	<p>Guide learners to expand a given number using product of prime concept.</p> <div style="border: 1px solid red; padding: 5px; margin: 10px 0;"> <p style="text-align: center;">Find the Highest Common Factor (HCF) of 36 and 72</p> </div> <p>1. Find the prime factors of both numbers</p> $36 = 2 \times 2 \times 3 \times 3$ $72 = 2 \times 2 \times 2 \times 3 \times 3$ <p>2. Use one of each of the numbers that are in both lists</p> $\text{HCF} = 2 \times 2 \times 3 \times 3$ $\text{HCF} = 36$ <p>Use real life scenarios to explain HCF to learners. Example: <i>Akweley has two pieces of paper. One piece is 24 cm wide and the other piece is 30 cm wide. She wants to cut both pieces into strips of equal width that are as wide as possible. How wide should she cut the strips?</i></p> <p>Answer: This problem can be solved using H.C.F. because we are cutting or “dividing” the strips of cloth into smaller pieces (Factor) of 24 and 30 (Common) and we are looking for the widest possible strips (Highest).</p> <p>So, H.C.F. of 24 and 30 is 6 So we can say that Akweley should cut each piece to be 18 cm wide.</p>	Counters, bundle and loose straws base ten cut square, Bundle of sticks

	<p>Have learners practice with more examples.</p> <p><u>Assessment</u></p> <p>Find the HCF of the following.</p> <p>1) 36 and 72</p> <p>2) 12 and 24</p> <p>3) 36 and 48</p> <p>4) 25 and 125</p> <p>5) 16 and 48</p>	
<p>PHASE 3: REFLECTION</p>	<p>Use peer discussion and effective questioning to find out from learners what they have learnt during the lesson.</p> <p>Take feedback from learners and summarize the lesson.</p>	