

EaD Comprehensive Lesson Plans



or



0248043888

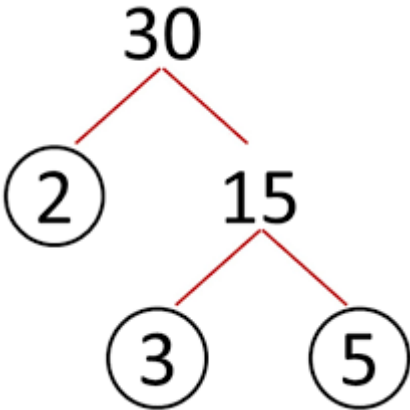
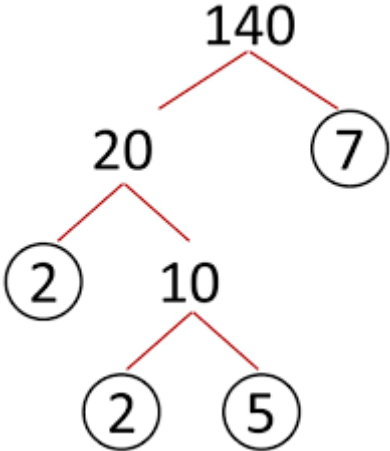
Strand:	Number	Sub-Strand:	Number Operations
---------	--------	-------------	-------------------

<https://www.TeachersAvenue.net>
<https://TrendingGhana.net>

BASIC 7

WEEKLY LESSON PLAN – WEEK 6

Content Standard:	B7.1.2.3 Demonstrate understanding and the use of powers of natural numbers in solving problems.				
Indicator (s)	B7.1.2.3.4 Find the value of a number written in index form. B7.1.2.3.5 Apply the concept of powers of numbers (product of prime) to find HC F.		Performance Indicator: Learners can find the Highest Common Factor applying the concept of Powers of numbers.		
Week Ending	18-10-2024				
Class	B.S.7	Class Size:		Duration:	
Subject	Mathematics				
Reference	Mathematics Curriculum, Teachers Resource Pack, Learners Resource pack, Textbook.				
Teaching / Learning Resources	Pictures, number chat, bottle tops, bundle of sticks		Core Competencies:	Interpret and apply learning in new context	
DAY/DATE	PHASE 1 : STARTER	PHASE 2: MAIN			PHASE 3: REFLECTION
TUESDAY	Explain the concept of Index form using a Power Point Presentation.	<div>1. Demonstrate how to find for the values of numbers writing in index form.</div> <div>2. Assist Learners to find for the values of numbers writing in index form.</div> <div>3. Learners brainstorm to convert numbers to index form.</div> <div>Writing Numbers in Index Form</div> <div>We know that: $2^3 = 2 \times 2 \times 2$<div>{3 factors are the same}</div>$= 8$</div> <div>So, we can write 8 as 2^3.</div> <div>Likewise, 27 can be written as 3^3 and 125 can be written as 5^3.</div> <div>So far, we have considered numbers that have a group of the same <u>factors</u>.</div> <div>Write 200 in simplest index form.</div> <div>Solution:</div>			Learners practice converting numbers to index forms. Exercise; Write the following numbers in simplest index forms; <div><div>i.</div><div>500</div></div> <div><div>ii.</div><div>300</div></div> <div><div>iii.</div><div>100</div></div> <div><div>iv.</div><div>900</div></div> <div><div>v.</div><div>80</div></div>

		$200 = 2 \times 100$ $= 2 \times 2 \times 50$ $= 2 \times 2 \times 2 \times 25$ $= 2 \times 2 \times 2 \times 5 \times 5$ $= 2^3 \times 5^2$	
THURSDAY	Through questions and answers, review Learners knowledge on the previous lesson.	<ol style="list-style-type: none"> 1. Learners brainstorm to explain the concept of Powers of numbers (product of Prime). 2. Assist Learners to expand given numbers using product of prime. 3. Learners in small groups to discuss and find HCF of numbers using product of prime. <div style="text-align: center;">  <pre> graph TD 30 --- 2((2)) 30 --- 15 15 --- 3((3)) 15 --- 5((5)) </pre>  <pre> graph TD 140 --- 20 140 --- 7((7)) 20 --- 2((2)) 20 --- 10 10 --- 2((2)) 10 --- 5((5)) </pre> </div>	<p>Reflect on the concept of Powers of numbers (Product of Prime).</p> <p>Exercise;</p> <p>Expand the following numbers as a product of prime factors;</p> <ol style="list-style-type: none"> i. 64 ii. 36 iii. 89 iv. 24 v. 12
FRIDAY	Discuss the meaning of the 'Prime factorization' concept with the Learners.	<ol style="list-style-type: none"> 1. Demonstrate finding HCF (Highest Common Factors) using prime factorization. 2. Assist Learners to find HCF of numbers using prime factorization. <p>○ Find highest common factor (HCF) of 14 and 8 by using prime factorization method.</p> <p><i>Solution:</i></p>	<p>Through questions and answers, conclude the lesson.</p> <p>Exercise;</p> <ol style="list-style-type: none"> 1. Find

$$\begin{array}{r|l} 2 & 14 \\ 7 & 7 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 8 \\ 2 & 4 \\ 2 & 2 \\ \hline & 1 \end{array}$$

$$14 = 1 \times 2 \times 7.$$

$$8 = 1 \times 2 \times 2 \times 2.$$

Common factor of 8 and 14 = 1 and 2.

H.C.F. is the product of lowest powers of factors common to all numbers.

Highest common factor of 8 and 14 = 2.

- Find highest common factor (HCF) of 9 and 27 by using prime factorization method.

Solution:

$$\begin{array}{r|l} 3 & 9 \\ 3 & 3 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 3 & 27 \\ 3 & 9 \\ 3 & 3 \\ \hline & 1 \end{array}$$

$$9 = 1 \times 3 \times 3.$$

$$27 = 1 \times 3 \times 3 \times 3.$$

Common factor of 9 and 27 = 1, 3 and 3.

Highest common factor of 9 and 27 = $3 \times 3 = 9$.

Find highest common factor (HCF) of 6 and 16 by using prime factorization method.

Solution:

$$\begin{array}{r|l} 2 & 6 \\ 3 & 3 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 16 \\ 2 & 8 \\ 2 & 4 \\ 2 & 2 \\ \hline & 1 \end{array}$$

$$6 = 1 \times 2 \times 3.$$

highest common factor (HCF) of 12 and 56 by using prime factorization method.

2. Find highest common factor (HCF) of 14 and 8 by using prime factorization method.
3. Find highest common factor (HCF) of 9 and 27 by using prime factorization method.

$$16 = 1 \times 2 \times 2 \times 2 \times 2.$$

Common factor of 6 and 16 = 2.

Highest common factor of 6 and 16 = 2

- Find highest common factor (HCF) of 18 and 24 by using prime factorization method.

Solution:

$$\begin{array}{r|l} 2 & 18 \\ \hline 3 & 9 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

$$\begin{array}{r|l} 2 & 24 \\ \hline 2 & 12 \\ \hline 2 & 6 \\ \hline 3 & 3 \\ \hline & 1 \end{array}$$

$$18 = 1 \times 2 \times 3 \times 3.$$

$$24 = 1 \times 2 \times 2 \times 2 \times 3.$$

Common factor of 18 and 24 = 1, 2, 3.

Highest common factor of 18 and 24 = $2 \times 3 = 6$.

Name of Teacher:

School:

District: