

## P.4 Mathematics

### Lesson one

#### Subtopic: Finding the Lowest Common Multiple (LCM)

##### Steps.

1. List the multiples of the given numbers
2. Identify the Common Multiples.
3. Identify the smallest Common Multiple as the LCM

##### Examples:

1. Find the Lowest Common Multiple of 6 and 10

$$M_6 = \{6, 12, 18, 24, \mathbf{30}, 36, 42, 48, 54, \mathbf{60}, 66, \dots\}$$

$$M_{10} = \{10, 20, \mathbf{30}, 40, 50, \mathbf{60}, 70, \dots\}$$

##### Note. Identify Common Multiples by ringing

Common Multiples are  $\{30, 60, \dots\}$

**LCM = 30.**

2. What is the LCM of 5 and 7

$$M_5 = \{5, 10, 15, 20, 25, 30, \mathbf{35}, 40, 45, 50, 55, 60, 65, 70, \dots\}$$

$$M_7 = \{7, 14, 21, 28, \mathbf{35}, 42, 49, 56, 63, 70, \dots\}$$

Common Multiples are  $\{35, 70, \dots\}$

**LCM = 35**

##### Exercise.

1. Find the Lowest Common Multiple of 2 and 3
2. Calculate the LCM of 6 and 8
3. What is the Lowest Common Multiple of 7 and 3?
4. Find the Lowest Common Multiple of 4 and 9?
5. Workout the LCM of 4 and 5.

## Lesson two

### Subtopic: Factors

- Factors are numbers which exactly divides another number.
- Factors are also numbers multiplied to get a multiple.

### Finding factors of numbers

#### Steps.

1. Identify a pair of number multiplied to get the given number in the question.
2. Practically multiply those numbers identified.
3. List those numbers in a set form and it will be the answer.

#### Examples

1. List all factors of 16

$$\begin{aligned}16 &= 1 \times 16 \text{ (table 1 and 16)} \\ &= 2 \times 8 \text{ (table 2 and 8)} \\ &= 4 \times 4 \text{ (table 4)}\end{aligned}$$

$$\mathbf{F16 = \{1, 2, 4, 8, 16\}}$$

#### Note:

- 1 is the first factor of every counting number.
- Every number is the last and biggest factor of itself.

2. How many factors does 8 have?

$$\begin{aligned}F8 &= 1 \times 8 \\ &= 2 \times 4\end{aligned}$$

$$F8 = \{1, 2, 4, 8\}$$

Therefore 8 has 4 factors

#### Activity.

1. How many factors does 15 have?
2. List all factors of 12
3. What is the 4<sup>th</sup> factor of 36?
4. Find the sum of the factors of 14
5. Find all factors 10

## Lesson three

### Subtopic: More on factors.

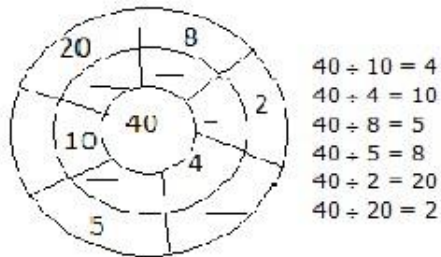
Completing diagrams by filling missing factors

#### Note:

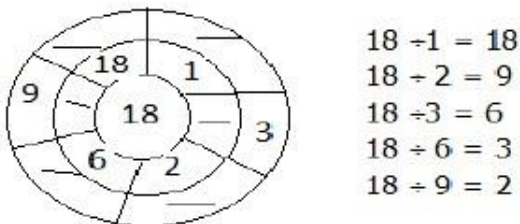
1. The multiple in the middle was got by multiplying two factors.
2. Then to find the missing factor, we shall divide the multiple in the corresponding factor.

#### Examples:

1. Study the diagram below and fill in the missing factors

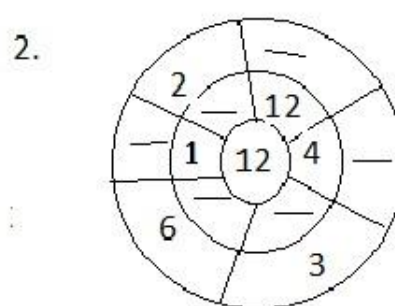
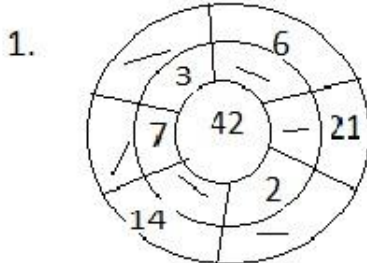


2. Complete the diagram below by filling in the missing factors.



#### Activity

Fill the missing gaps in the diagrams below



## Lesson four

### Subtopic: The Greatest/Highest Common Factor (GCF/HCF)

#### Examples:

1. Find the GCF of 12 and 18

$$F_{12} = \{1, 2, 3, 4, 6, 12\}$$

$$F_{18} = \{1, 2, 3, 6, 9, 18\}$$

Common factors

$$\{1, 2, 3, 6\}$$

$$\text{GCF} = 6$$

2. Which is the highest common factor of 14 and 21?

$$F_{14} = \{1, 2, 7, 14\}$$

$$F_{21} = \{1, 3, 7, 21\}$$

Common factors

$$\{1, 7\}$$

$$\text{HCF} = 7$$

#### Activity.

1. Find the GCF of 8 and 12
2. What is the HCF of 15 and 18?
3. Find the GCF of 36 and 24
4. Which is the highest common factor of 16 and 20?
5. Calculate the GCF of 9 and 27

## Lesson five

**THEME: NUMERACY**

**TOPIC : OPERATIONS ON WHOLE NUMBERS.**

**SUB TOPIC: ADDITION OF WHOLE NUMBERS.**

**A. Adding whole numbers without regrouping.**

**Note:** Numbers must always be arranged correctly according to correct place values before adding.

Example 1

T/Th	Th	H	T	O
1	3	4	7	2
+ 3	2	1	0	3
4	5	5	7	5

Example 2.

T/Th	Th	H	T	O
4	2	8	3	4
+ 3	6	1	3	1
7	8	9	6	5

**Exercise:**

Work out the following numbers. (Arrange vertically)

1. 7590 + 24042
2. 12254 + 54024
3. 36521 + 31325
4. 56302 + 32246
5. 12104 + 32064