SESSION	**: 5**
CLASS	**: IV**
SUBJECT	**: MATHEMATICS**
CHAPTER NUMBER	**: 10**
CHAPTER NAME	**: FACTORS AND MULTIPLES**
SUBTOPIC	**: LCM BY COMMON DIVISION METHOD, EXERCISE-10 E Q.NO.3**

LEARNING OBJECTIVE

- **Enable the students to understand how to find the LCM by common division method.**

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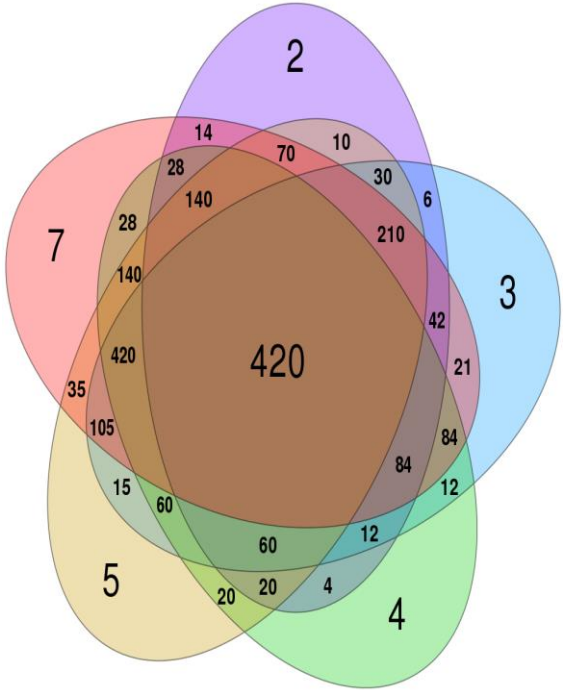
COMMON MULTIPLES

LCM by Common Division Method:

In this method, we start by dividing at least one of the given numbers by the smallest **prime number**. Bring down the numbers that are indivisible as it is. Keep on reporting the method till all the quotients are **1** in the last row. Then, multiply all the **prime numbers** to get the **LCM** of the given numbers.



COMMON MULTIPLES

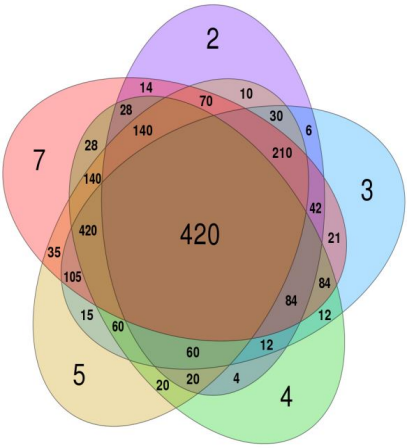
LCM by Common Division Method

Example : 1 Find the LCM of 16, 24 and 30.

Solution :

	16, 24, 30

Step 1 : Write all the numbers in a row, separate by commas.



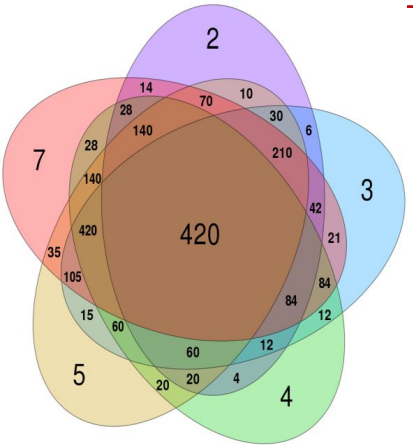
COMMON MULTIPLES

LCM by Common Division Method

Example : 1 Find the LCM of 16, 24 and 30.

Solution :

2	16, 24, 30
	8, 12, 15



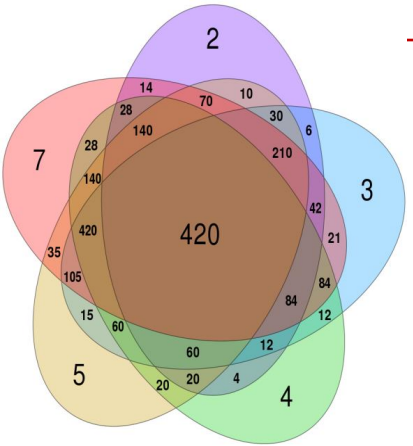
Step 2 : Choose the **smallest prime number** that divides any one of the given numbers..

COMMON MULTIPLES

LCM by Common Division Method

Example : 1 Find the LCM of 16, 24 and 30.

Solution :



2	16, 24, 30
2	8, 12, 15
2	4, 6, 15

Step 3 : Keep on dividing the **numbers** by the **smallest prime numbers** and bring the indivisible numbers down as it is.

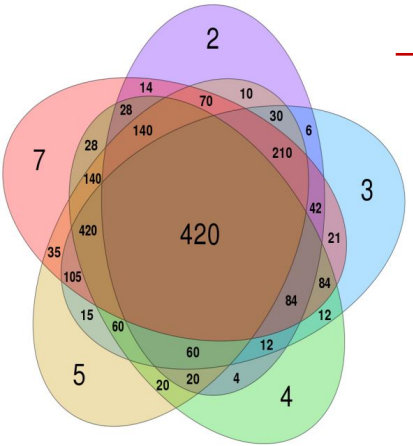
COMMON MULTIPLES

LCM by Common Division Method

Example : 1 Find the LCM of 16, 24 and 30.

Solution :

2	16, 24, 30
2	8, 12, 15
2	4, 6, 15
3	2, 3, 15
	2, 1, 5



Step 4 : Repeat till you get all ones (**1**) in the last row.

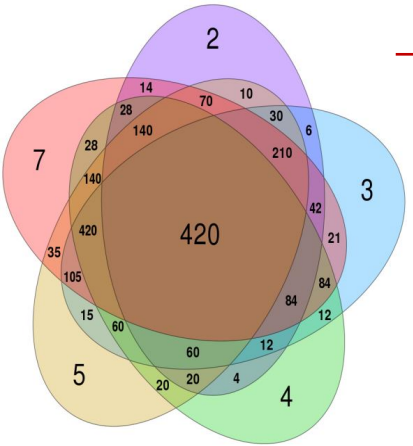
COMMON MULTIPLES

LCM by Common Division Method

Example : 1 Find the LCM of 16, 24 and 30.

Solution :

2	16, 24, 30
2	8, 12, 15
2	4, 6, 15
3	2, 3, 15
	2, 1, 5



Step 5 : Multiply all the **prime numbers** on the left to get the **LCM** of **16**, **24** and **30**.

So, LCM of 16, 24 and 30 is
2 × **2** × **2** × **2** × **3** × **5** = **240**.

COMMON MULTIPLES

Exercise 10(E)

3. Find the LCM of the given numbers by common division method

(a) **6, 36**

Solution:

2	6, 36
3	3, 18
3	1, 6
	1, **2**

So, LCM of 6 and 36 is
2 × **3** × **3** × **2** = **36**.

COMMON MULTIPLES

Exercise 10(E)

3. Find the LCM of the given numbers by common division method

(b) **25, 10**

Solution:

5	25, 10
	5, 2

So, LCM of 25 and 10 is

5 × **5** × **2** = **50**.

COMMON MULTIPLES

Exercise 10(E)

3. Find the LCM of the given numbers by common division method

(c) 45, 27

Solution:

3	45, 27
3	15, 9
	5, 3

So, LCM of 45 and 27 is

3× **3** × **5** × **3** = **135**.

COMMON MULTIPLES

Exercise 10(E)

3. Find the LCM of the given numbers by common division method

(d) 42, 49

Solution:

7	42, 49
2	6, 7
	3, 7

So, LCM of 42 and 49 is
7 × **2** × **3** × **7** = **294**.

COMMON MULTIPLES

Exercise 10(E)

3. Find the LCM of the given numbers by common division method

(e) 32, 64

Solution:

2	32, 64
2	16, 32
2	8, 16
2	4, 8
2	2, 4
	1, **2**

So, LCM of 32 and 64 is
2 × **2** × **2** × **2** × **2** × **2** = **64**.

LEARNING OUTCOME:

Students are able to understand how to find the LCM by using common division method.

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THANKING YOU

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