MONTH : AUGUST

SESSION : 9

CLASS : V

SUBJECT : MATHEMATICS

CHAPTER NUMBER: 8

CHAPTER NAME : FACTORS AND MULTIPLES

SUB-TOPIC : RELATION BETWEEN H.C.F. , L.C.M. AND NUMBERS, EXERCISE 8 D Q.NO. 5 TO 8

LEARNING OBJECTIVE :

Enable the students

- **To Understand the concept of H.C.F. and L.C.M.**
- **To understand the relation between H.C.F. and L.C.M.**

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EXERCISE 8 [D]

5. The greatest number which divides 1155 and 3080 exactly is 385. find the least number which is divisible by 1155 and 3080

Solution:

The greatest number that divides 1155 and 3080 is 385.

Which means H.C.F. of 1155 and 3080 = 385

The least number which is divisible by 1155 and 3080 is L.C.M. of 1155 and 3080

EXERCISE 8 [D]

1155 and 3080

5	1155 , 3080
3	231 , 616
7	77 , 616
11	11 , 88
2	1 , 8
2	1 , 4
2	1 , 2
	1 , 1

L.C.M. = 5 × 3 × 7 × 11 × 2 × 2 × 2 = 9240

- **The least number divisible by 1155 and 3080 is 9240**

EXERCISE 8 [D]

6. Find the greatest number that can divide 663 and 975 exactly.

The H.C.F. of 663 and 975 = **39**

$$
\begin{array}{r|l}
 & 1 \\
\hline
663 & 975 \\
 & 663 \\
\hline
 & 2 \\
\hline
312 & 663 \\
 & 624 \\
\hline
 & 8 \\
\hline
39 & 312 \\
 & 312 \\
\hline
 & 0
\end{array}
$$

$\therefore$ The greatest number which can divide 663 and 975 exactly is **39**

EXERCISE 8 [D]

7. Which is the greatest 3-digit number which is exactly divisible by 9 and 21.

The L.C.M. of 9 and 21 = $3 \times 3 \times 7 = 63$

3	9 , 21
3	3 , 7
7	1 , 7
	1 , 1

The greatest 3-digit number = 999

Let's find if 63 can divide 999 exactly

EXERCISE 8 [D]

$$
\begin{array}{r}
15 \\
63 \overline{)\,999} \\
\underline{63\downarrow} \\
369 \\
\underline{315} \\
54
\end{array}
$$

54 = remainder

- The greatest 3-digit number which is exactly divisible by 63 = 999 – 54 = 945

- The greatest 3-digit number which is exactly divisible by 9 and 21 is 945

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EXERCISE 8 [D]

8. Find the greatest 4-digit number which is exactly divisible by 12, 32 and 48

The L.C.M. of 12, 32 and 48 = $2 \times 2 \times 2 \times 3 \times 2 \times 2 = 96$

2	12 , 32 , 48
2	6 , 16 , 24
2	3 , 8 , 12
3	3 , 4, 6
2	1 , 4, 2
2	1 , 2, 1
	1 , 1, 1

The greatest 4-digit number = 9999

Let's find if 96 can divide 9999 exactly

EXERCISE 8 [D]

```
        104
    ┌──────
96  │ 9999
    │ 96
    ├──────
      39
      0
    ──────
      399
      384
    ──────
```

1 5 = remainder

➢ The greatest 4-digit number which is exactly divisible by 96 = 9999 – 15 = 9984

∴ The greatest 4-digit number which is exactly divisible by 12, 32 and 48 is 9984

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EXERCISE 8 [D]

- **Home Assignment – Complete Exercise 8 D Q.No. 4,9 and 10 in your notebook.**

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