🎯 **Day 5 – Factors & Multiples**

🧩 Core Concept Focus

- Understanding **factors** and **multiples**
- Relationship between **HCF** and **LCM**
- Strengthening number theory concepts using loops, modulo, and basic arithmetic

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🏫 Class Questions

1. **Print All Factors of a Number**
   - **Input:** `N = 24`
   - **Output:** `[1, 2, 3, 4, 6, 8, 12, 24]`

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2. **Print All Multiples of a Number up to N**
   - **Input:** `Number = 4, Limit = 30`
   - **Output:** `[4, 8, 12, 16, 20, 24, 28]`

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3. **Find the HCF (Highest Common Factor) or GCD of Two Numbers**
   - **Input:** `12, 18`
   - **Output:** `HCF = 6`

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4. **Find the LCM (Least Common Multiple) of Two Numbers**
   - **Input:** `12, 18`
   - **Output:** `LCM = 36`

🏠 Homework Questions

1. **Count the Total Number of Factors of a Number**
   - **Input:** `N = 24`
   - **Output:** `8 Factors`

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2. **Sum of All Factors of a Number**
    - **Input:** `N = 12`
    - **Output:** `Sum = 28`

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3. **Find the Greatest Factor of a Number (Other Than Itself)**
    - **Input:** `N = 36`
    - **Output:** `18`

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4. **Check if a Number is a Perfect Number**
    - **Input:** `N = 28`
    - **Output:** `Perfect Number`
    - If sum of all proper divisors = number → Perfect Number.

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5. **Find the HCF and LCM of Three Numbers**
    - **Input:** `8, 12, 16`
    - **Output:** `HCF = 4, LCM = 48`

This is a paragraph with **bold** and *italic* text.

Lists Example

- First item
- Second item with **bold**
- Nested item with *italic*
- Another nested item
- Third item

Java Code Example

```
function greeting(name) {
return `Hello, ${name}!`;
}
```

Python Example

```
def fibonacci(n):
if n <= 1:
    return n
else:
    a, b = 0, 1
    for _ in range(n - 1):
        a, b = b, a + b
    return b

# List comprehension example
squares = [x**2 for x in range(10)]
```

Blockquote Example

> This is a blockquote.
> It can span multiple lines.

Table Example

Feature	Description
Tables	Organized data display
Lists	Bullet points and numbers
Code	Syntax highlighted blocks

Link Example

[Visit GitHub]

Cat Image Example