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Sec: **ME -15 (B)**

## Home task

**#05**

### Task#01

```
#include <iostream>
```

```
using namespace std;
```

```
int main(){
```

```
    int a,b,HCF,LCM;
```

```
    cout<<"enter number: "<<endl;
```

```
    cin>>a;
```

```
    cout<<"enter number: "<<endl;
```

```
    cin>>b;
```

```
    for(int i=1;i<=a && i<=b ;i++)
```

```
        if(a%i==0 && b%i==0){
```

```
            HCF=i;
```

```
        }
```

```
    cout<<"HCF is: "<<HCF<<endl;
```

```
    LCM=a*b/HCF;
```

```
    cout<<"LCM is: "<<LCM;
```

```
    return 0;
```

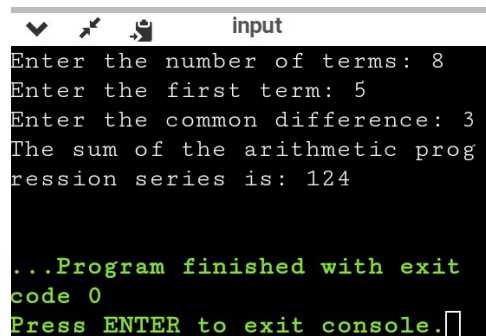
```
}
```

```
input
enter number:
24
enter number:
72
HCF is: 24
LCM is: 72

...Program finished with exit
code 0
Press ENTER to exit console.
```

## Task#02

```
#include<iostream>
using namespace std;
int main() {
    int n, a, d;
    cout << "Enter the number of terms: ";
    cin >> n;
    cout << "Enter the first term: ";
    cin >> a;
    cout << "Enter the common difference: ";
    cin >> d;
    int sum = (n * (2 * a + (n - 1) * d)) / 2;
    cout << "The sum of the arithmetic progression series is: " << sum <<
endl;
    return 0;
}
```



```
input
Enter the number of terms: 8
Enter the first term: 5
Enter the common difference: 3
The sum of the arithmetic prog
ression series is: 124

...Program finished with exit
code 0
Press ENTER to exit console.
```

## Task#03

```
#include <iostream>
using namespace std;
int main() {
    int n, i, j, space = 1;
    cout << "Enter the number of rows: ";
    cin >> n;
    space = n - 1;
    for (j = 1; j <= n; j++) {
        for (i = 1; i <= space; i++)
            cout << " ";
        space--;
        for (i = 1; i <= 2 * j - 1; i++)
            cout << "**";
        cout << "\n";
    }
    space = 1;
    for (j = 1; j <= n - 1; j++) {
        for (i = 1; i <= space; i++)
            cout << " ";
        space++;
        for (i = 1; i <= 2 * (n - j) - 1; i++)
```

[illegible]

```
#include<iostream>
using namespace std;
int main() {
    int num, binary = 0, i = 1, remainder;
    cout << "Enter a decimal number: ";
    cin >> num;
    while (num != 0) {
        remainder = num % 2;
        num = num / 2;
        binary = binary + (remainder * i);
        i = i * 10;
    }
    cout << "Equivalent binary number: " << binary << endl;
    return 0;
}
```

```
input
Enter a decimal number: 14
Equivalent binary number: 1110

...Program finished with exit
code 0
Press ENTER to exit console.
```

The END