Find out time complexity of the following problems:

Problem 1:

```cpp
int i=0,sum = 0;
while(i<n)
{
    int j=0;
    while(j<n)
    {
        sum += j;
        j+=2;
    }
    i++;
}
```

Problem 2:

```cpp
for(int i=0;i<n;i+=10)
{
    for(int j=n;j>=0;j--)
    {
        cout << "Hello" << endl;
    }
}

for(int i=0;i<n;i++)
{
    cout << "Hi" << endl;
}
```

Problem 3:

```
for(int i=0;i<n;i++)
{
    int j=0;
    while(j*j<n)
    {
        i+j;
        j++;
    }
}
```

Problem 4:

```
for(int i=0;i<n;i++)
{
    for(int j=n;j>=0;j--)
    {
        for(int k=1;k<=n;k++)
        {
            sum += i+j+k;
        }
    }
}

for(int i=0;i<n;i++)
{
    for(int j=1;j<=n;j++)
    {
        sum += i+j;
    }
}
```

Problem 5:

```cpp
for(int i=0;i*i<n;i++)
{
    sum += i;
}


for(int i=0;i<n;i++)
{
    sum += i;
    i*=k;
}
```

Problem 6:

```cpp
for(int i=0;i<n;i++)
{
    cin >> a[i];
}
sort(a,a+n);
```

Problem 7:

```cpp
for(int i=0;i<n;i++)
{
    sort(a,a+n);
}
```

Problem 8:

```cpp
int k=1;
while(k<=n){
    cout<<k<<endl;
    k=k*2;
}
```

Problem 9:

```cpp
for (int i = 0; i < n; i++)
    for (int j = i; j > 0; j--)
        cout << i << j;
```

Problem 10:

```
for (int i = 0; i < n; i++)
     for (int j = i; j > 0; j--)
        for(int k=j; k > 0; k--)
            cout << i << j << k;
```

Problem 11:

```
for(int i=n/2;i<=n;i++){
      for(int j=1;j<=n;j=j*2){
             cout<<i<<j<<endl;
      }
}
```

Problem 12:

```
for(int i=n/2;i<=n;i++){
      for(int j=1;j<=n;j=j++){
             cout<<i<<j<<endl;
      }
}
```