National University of sciences and technology (NUST)

Computer Systems and Programming

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Home Tasks

Question # 1:

```
#include <iostream>
using namespace std;
int main()  {
        cout<<"HOME TASK 1"<<endl;
        int a,ans;
        a = 6;
        ans=a*(a-1)*(a-2)*(a-3)*(a-4)*(a-5);
        cout<<"Factorial of 6="<<ans<<endl;
return 0;
}
```

Question # 2:

```
#include<iostream>
#include<math.h>
using namespace std;
int main() {
   cout<<"HOME TASK 2"<<endl;
   int X1,X2,Y1,Y2;
   float d;
```

```cpp
    cout<<"Enter X1:";
    cin>>X1;
    cout<<"Enter Y1:";
    cin>>Y1;
    cout<<"Enter X2:";
    cin>>X2;
    cout<<"Enter Y2:";
    cin>>Y2;
    d=sqrt(pow((X2-X1),2)+pow((Y2-Y1),2));
    cout<<"Distance between 2 points = "<<d<<endl;
return 0;
}
```

Question # 3:

```cpp
#include<iostream>
using namespace std;
  int main()  {
        cout<<"HOME TASK 3"<<endl;
            float a,b,c;
        cout<<"Enter length in centimeters:"<<endl;
        cin>>a;
        b = a/100;
        c = b/1000;
        cout<<"Length in meters="<<b<<endl;
```

```cpp
        cout<<"Length in kilometers="<<c<<endl;

        return 0;

    }
```

Question # 4:

```cpp
#include<iostream>

#include<math.h>

using namespace std;

int main () {

        cout<<"HOME TASK 4";

        int a,b,c;

        cout<<"Enter value of a:";

        cin>>a;

        cout<<"Enter value of b:";

        cin>>b;

        c=(pow(a,2))+(2*a*b)+(pow(b,2)) ;

        cout<<"Answer="<<c<<endl;

        return 0;

}
```