OOPS ASSIGNMENT

ANS 1-

```
#include<iostream>
using namespace std;
class calc
{
        public:
   float f1,f2;
   char op;
        void input()
        {
                int a,b,c,d;
                cout<<"enter fractions"<<endl;
                cin>>a>>b>>c>>d;
                 f1=a/b;
                 f2=c/d;
        };
        void optr()
        {
                cout<<"enter the operator"<<endl;
                cin>>op;
        };
        void display(calc&x)
        {
                float c;
                switch(op)
                {
                        case '+':
                        {
                                c=f1+f2;
                                cout<<c;
                                break;
                        }


                        case '*':
                        {
```

```
                c=f1*f2;
                cout<<c;
                break;
            }

        case '-':
        {
                c=f1-f2;
                cout<<c;
                break;
        }

        case '/':
        {
                c=f1/f2;
                cout<<c;
                break;
        }
        default:
                {
                        cout<<"invalid operator"<<endl;
                }
}
        };
};
int main()
{
calc o1;
o1.input();



o1.optr();
o1.display(o1);
        return 0;
}
```

ANS 2-

```
#include<iostream>
```

```
#include<math.h>

using namespace std;

class Ar_of_Circle
{
        private :
                        int x1;
                        int x2;
                        int y1;
                        int y2;
        public :
                void input()
                {
                    cout<<"enter the x and y coordinates"<<endl;
                    cin>>x1>>x2>>y1>>y2;
                     }

                        void area()
                        {

                                int a,b;
                                float c;

                                a=(x2-x1)*(x2-x1);
                                b=(y2-y1)*(y2-y1);
                                c=sqrt(a+b);
                                c=c/2;



                                c=3.14*c*c;

                                cout<<"The area is "<<c<<"sq. units"<<endl;


                        }
```

```
};

int main()
{
		Ar_of_Circle ar;
		ar.input();
		ar.area();
	return 0;
}
```

ANS 3-

```
#include<stdio.h>
#include<iostream>

using namespace std;

class QUADRANT
{

	public :
		int x,y;
		void input()
		{
			cout<<"Enter the x and y coordinates respectively"<<endl;
		cin>>x>>y;
			}

			void find()
			{
				if(x>=0 && y>=0)
				{
					cout<<"Point lies in First quadrant"<<endl;
				}
				else if(x<0 && y>=0)
				{
					cout<<"Point lies in second quadrant"<<endl;
				}
				else if(x<0 && y<0)
```

```
                {
                        cout<<"Point lies in third quadrant"<<endl;
                }
                else if(x>=0 && y<0)
                {
                        cout<<"Point lies in Fourth quadrant"<<endl;
                }

        }
};

int main()
{
   QUADRANT graph;
        graph.input();
        graph.find();
        return 0;
}
```

ANS 4-

```
#include<iostream>
#include<stdio.h>

using namespace std;

class Triangle{

        public :
    int x,y,z;
                void input()
                {
                        cout<<"Enter the Sides of Triangle"<<endl;
            cin>>x>>y>>z;
                }


                        void right()
                        {
                                int max;
```

```
                max=x;

                int l;

                if(y>x && y>z)
                {
                        max=y;
                        l=(z*z)+(x*x);
                }
                else if( z>x && z>y )
                {
                        max=z;
                        l=(y*y)+(x*x);
                }
                else
                   l=(y*y)+(z*z);




                int m=max*max;

                if(m==l)
                {
                        cout<<"It is a right Triangle"<<endl;
                }
                else
                {
                        cout<<"It is not a right triangle"<<endl;
                }


        }


};
```

```
int main()
{


	Triangle rt;
	rt.input();
	rt.right();
	return 0;
}
```

ANS 5-

```
#include<iostream>
using namespace std;

class Bank_Balance
{
	public :
		float bal,dep,wid;
		void input()
		{
			cout<<"enter current bank balance, withdrawing amount, depositing amount"<<endl;
			cin>>bal>>wid>>dep;

				}
				void withdraw()
				{

					bal=bal-wid;
				}

				void  deposit()
				{
					bal=bal+dep;
				}

				void const display()
				{
```

```
                                        if(bal>=0)
                                         cout<<"The total  balance left is  "<<bal<<endl;
                                         else
                                        cout<<"invalid withdrawl and deposition"<<endl;
                                    }
};

int main()
{


   Bank_Balance b;


   b.input();
            b.withdraw();
            b.deposit();
            b.display();


            return 0;
}
```

ANS 6-

a- 8

b- 10

c- 5500.263

d- 10 2.5

e- 5 6