

Practical 2(b)

CODE:

```
import java.util.*;
class sinx
{
    public static void main(String args[])
    {
        Scanner sc= new Scanner(System.in);
        System.out.print("Number of terms: ");
        int n=sc.nextInt();
        System.out.print("Find the sine of(please remember to put input in radians): ");
        double x =sc.nextDouble();
        System.out.println();
        double sin=0.0;
        int sign=1;
        int ctr=0,i=0;
        while(ctr<=n)
        {
            if(i%2 !=0)
            {
                sin+=(double)(sign*Math.pow(x,i)/fact(i));
                sign*=-1;
                ctr++;
            }
            i++;
        }
        System.out.println("sin("+x+")= "+sin);
    }
    public static int fact(int a)
    {
        int p=1;
        for(int i=1;i<=a;i++)
        p*=i;
        return p;
    }
}
```

OUTPUT:

Number of terms: 10

Find the sine of(please remember to put input in radians): 0.7853981

sin(0.7853981)= 0.7071067362050013