a. Input two numbers and compute all arithmetic operations.

main.c

Run

```c
#include <stdio.h>
int main()
{
    int a = 9,b = 4, c;

    c = a+b;
    printf("a+b = %d \n",c);
    c = a-b;
    printf("a-b = %d \n",c);
    c = a*b;
    printf("a*b = %d \n",c);
    c = a/b;
    printf("a/b = %d \n",c);
    c = a%b;
    printf("Remainder when a divided by b = %d \n",c);

    return 0;
}
```

Output

```
/tmp/iukJusjk59.o
a+b = 13
a-b = 5
a*b = 36
a/b = 2
Remainder when a divided by b = 1
```

b. Input radius, compute area, diameter, & circumference of the circle and display them

main.c

Run

```c
#include <stdio.h>

 main()
{
    float area, diameter, circumference;
    int radius;

    printf ("please enter radius=");
    scanf ("%d", &radius);

    area = 3.14*radius*radius;
    printf ("area=%f\n", area);

    diameter= 2*radius;
    printf ("diameter=%f\n", diameter);

    circumference= 2*radius*3.14;
    printf ("circumference=%f\n", circumference);

     return 0;
}
```

Output

```
/tmp/pMkK8kxdox.o
please enter radius=3
area=28.260000
diameter=6.000000
circumference=18.840000
```

Samuela Abigail
71762108039

c. Swapping the values of two variables using third variable.

main.c

Run

Output

```c
#include<stdio.h>
int main() {
  double var1, var2, temp;
  printf("Enter first number: ");
  scanf("%lf", &var1);
  printf("Enter second number: ");
  scanf("%lf", &var2);

  temp = var1;
  var1 = var2;
  var2 = temp;

  printf("\nAfter swapping, first number = %.2lf\n", var1);
  printf("After swapping, second number = %.2lf", var2);
  return 0;
}
```

```
/tmp/pMkK8kxdox.o
Enter first number: 1
Enter second number: 4
After swapping, first number = 4.00
After swapping, second number = 1.00
```

d.Program for swapping the values of two variables without using a third variable.

main.c

Run

Output

```c
#include <stdio.h>
int main()
{
double var1, var2;
  printf("Enter first number: ");
  scanf("%lf", &var1);
  printf("Enter second number: ");
  scanf("%lf", &var2);

var1 = var1 + var2;
var2 = var1 - var2;
var1 = var1 - var2;
printf("\nAfter swapping, first number = %.2lf\n", var1);
  printf("After swapping, second number = %.2lf", var2);

return 0;
}
```

```
/tmp/3hHxAkzYzH.o
Enter first number: 3
Enter second number: 7
After swapping, first number = 7.00
After swapping, second number = 3.00
```

Samuela Abigail
71762108039

e. To evaluate algebraic expression (ax+b)/(ax-b).

main.c

Run

```c
#include <stdio.h>
int main()
{
int a,b,x;
float k;
printf ("enter value of a,b,x=");
scanf ("%d%d%d",&a,&b,&x);

k= (a*x+b)/(a*x-b);
printf ("k=%f", k);

return 0;
}
```

Output

```
/tmp/3hHxAkzYzH.o
enter value of a,b,x=1
7
9
k=8.000000
```

Samuela Abigail
71762108039