1)List out the data types, their format specifiers.

DATA TYPES	DESCRIPTION	FORMAT SPECIFIER
CHAR	Character	%c
UNSIGNED CHAR		
SHORT	Signed integer	%d
UNSIGNED SHORT		
INT		
LONG		
FLOAT	Scientific notation of float values	%e or %E
DOUBLE		
Float	Floating point	%f
Float	Scientific Notation	%g or %G
Double		
short	Signed Integer(short)	%hi
Unsigned short	Unsigned Integer(short)	%hu
short	Signed Integer	%i
Unsigned short		
int		
long		
long	Signed Integer	%l or %ld or %li
double	Floating Point	%lf
Long double	Floating point	%Lf
Unsigned int	Unsigned integer	%lu
Unsigned long		

Long long	Signed integer	%lli, %lld
Unsigned long long	Unsigned integer	%llu
void*	Address of pointer to void void*	%p
char*	string	%s

Unsigned int	Unsigned integer	%u
Unsigned long		
short	Hexadecimal representation of unsigned integer	%x or %X
Unsigned short		
int		
Unsigned int		
long		
short	Octal representation of integer.	%o
Unsigned short		
int		
Unsigned int		
	Prints nothing	%n
	Prints % character	%%

2) try input and output on different variables,create variables and then formatted output and inputs, print some expressions with arithmetic operations.

```
#include<stdio.h>
int main()
{
float a,b, div;
printf(“Enter two numbers to perform division:\n”);
scanf(“%f%f”,&a,&b);
div=a/b;
printf(“quotient = %d\n” , div);
return 0;
}
```

OUTPUT

Enter two number to perform division:
10
3
quotient =3

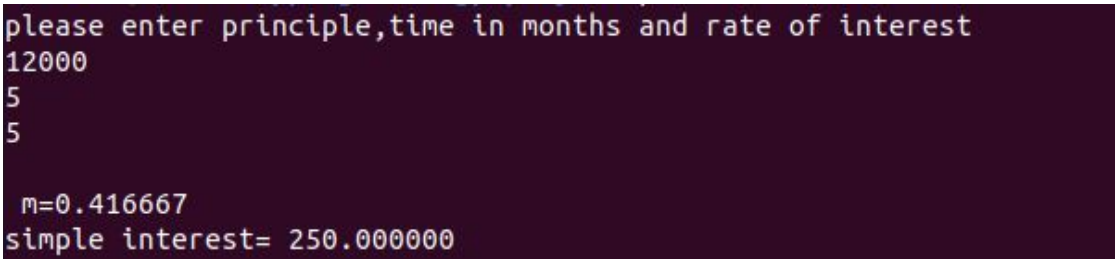
3)Calculation of simple interest.

```
#include<stdio.h>
Int main()
{
int p,n;
float m,r,si;
printf(“please enter principle,time in months and rate of interest\n");
scanf(“%d%d%f”, &p,&n,&r);
m= n/12.0;          // divide by 12.0 taken as float division (or) divide by (float)12
printf("\n m=%f \n", m); // verifying m value
si = p * m * r / 100;
```

```
printf(“simple interest = %f\n”, si);
return 0;
}
```

OUTPUT:

```
please enter principle,time in months and rate of interest
12000
5
5
simple interest= 250.000000
```



4) calculate of average of 4 numbers & print.

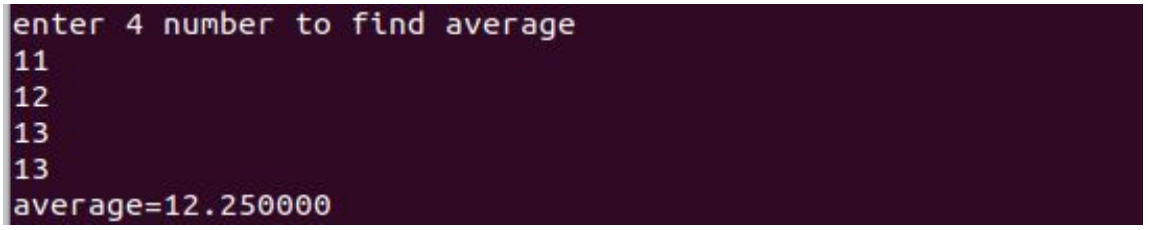
```
#include<stdio.h>

int main()
{
int a,b,c,d;
float avg;

printf(“Enter 4 number to find average”);
scanf(“%d%d%d%d”, &a,&b,&c,&d);
avg =(a+b+c+d)/4.0                    // divide by 4.0 to perform
float division
printf(“average = %f” ,avg);
return 0;
}
```

OUTPUT:

enter 4 number to find average
11
12
13
13
average=12.250000



5)calculate area and perimeter of rectangle

```
#include<stdio.h>
int main()
{
int l,w;
printf("Enter the length and width of the rectangle:\n");
scanf("%d%d", &l,&w);
printf("area = %d and perimeter = %d\n", l*w,(2*l)+(2*w) );
return 0;
}
```

OUTPUT:

Enter the length and width of the rectangle:
12
1
area = 12 and perimeter = 26

```
Enter the length and width of the rectangle:
12
1
area = 12 and perimeter = 26
```

6)calculate area and perimeter of square

```
#include<stdio.h>
int main()
{
	int side;
	printf("Enter the side\n");
	scanf("%d", &side);
	printf("area of square = %d \n and perimeter of square = %d\n",
side*side, 4*side);
	return 0;
}
```

OUTPUT:

Enter the side
10
Area of square = 100
And perimeter of square = 40

```
Enter the side
10
area of square = 100
 and perimeter of square = 40
```

7)calculate area and perimeter of circle

```
#include<stdio.h>
int main()
{
        float r;
        printf("enter rad value\n");
        scanf("%f", &r);
        printf("area of circle =%f \nperimeter of circle =%f\n", 3.14*r*r,
2*3.14*r  );
return 0;
}
```

OUTPUT:

```
enter rad value
12
area of circle =452.160000
perimeter of circle =75.360000
```

8)If sales price and profit of n items is given find the cost price of 1 item.

```
#include<stdio.h>
int main()
{
        int i,j, n;
        float  cp,sp,profit;
        printf("Enter number of items:\n");
        scanf("%d",&n);
        printf("enter the sales price and profit\n");
```

```
        for(i=0;i<n;i++)
        {
                printf("sales =");
                scanf("%f",&sp);
                printf("profit =");
                scanf("%f",&profit);
                cp = sp - profit;
                printf("cost price for entered item =%f\n", cp);
        }
        return 0;
}
```

OUTPUT:

```
Enter number of items:
2
enter the sales price and profit
sales =150
profit =50
cost price for entered item =100.000000
sales =24
profit =2.45
cost price for entered item =21.549999
```