Program 1:

Step 1

a=70
b=80
c=85
d=88
e=90
f=a+b+c+d+e
g=f/5

Step 2

int a=70;
int b=80;
int c=85;
int d=88;
int e=90;
int f=a+b+c+d+e
int g=f/5

```c
//step 3
#include <stdio.h>

int main()

{
    int a=70;
    int b=80;
    int c=85;
    int d=88;
    int e=90;
    int f=a+b+c+d+e;
    float g=f/5;

    printf("sum=%d and percentage=%f",f,g);

    return 0;
}
```

```c
//step 4
#include <stdio.h>

int main()

{
    int maths=70;
    int english=80;
    int hindi=85;
    int sst=88;
    int science=90;

    int sum=a+b+c+d+e;
    float percentage=sum/5;

    printf("sum=%d and
percentage=%f",sum,percentage);

    return 0;
}
```

```c
//step 5
#include <stdio.h>

int main()
{
    int maths=70;
    printf("Enter marks of maths:");
    scanf("%d",&maths);

    int english=80;
    printf("Enter marks of english:");
    scanf("%d",&english);

    int hindi=85;
    printf("Enter marks of hindi:");
    scanf("%d",&hindi);

    int sst=88;
    printf("Enter sst marks:");
    scanf("%d",&sst);

    int science=90;
    printf("Enter science marks:");
    scanf("%d",&science);

    int sum = maths + english + hindi +  sst +
science;
    float percentage = sum/5;
```

```c
    printf("sum=%d and
percentage=%f",sum,percentage);

    return 0;
}
```

```c
//step 6
#include <stdio.h>

int main()
{
    int maths, english, hindi, sst, science, sum,
percentage;
    printf("Enter marks of maths:");
    scanf("%d",&maths);

    printf("Enter marks of english:");
    scanf("%d",&english);

    printf("Enter marks of hindi:");
    scanf("%d",&hindi);

    printf("Enter sst marks:");
    scanf("%d",&sst);

    printf("Enter science marks:");
    scanf("%d",&science);

    sum = maths + english + hindi + sst + science;
    percentage = sum/5;

    printf("sum=%d and
percentage=%f",sum,percentage);
```

```
    return 0;
}
```

Program 2:

Step 1

p=1000
r=100
t=2
SI=(p*r*t)/100
A=p*(1+r/100)^t
CI=A-p

Step 2

float p=1000;
float r=100;
float t=2;
float SI=(p*r*t)/100;
float A=p*pow(1+r/100),t);
float CI=A-p

```c
//step 3
#include <stdio.h>
#include <math.h>

int main()
{
    float p=100;
    float r=10;
    float t=2;

    float SI=(p*r*t)/100;
    float A=p*pow(1+r/100,t);
    float CI=A-p;

    printf("Simple interest=%f and Compound
interest=%f",SI,CI);

    return 0;
}
```

```c
//step 4
#include <stdio.h>
#include <math.h>

int main()
{
    float principle=100;
    float RateOfInterest=10;
    float time=2;

    float SI=(principle*RateOfInterest*time)/100;
    float Amount=principle*pow
(1+RateOfInterest/100,time);
    float CI=Amount-principle;

    printf("Simple interest=%f and Compound
interest=%f",SI,CI);

    return 0;
}
```

```c
//step 5
#include <stdio.h>
#include <math.h>

int main()
{
    float principle=100;
    printf("Enter principle amount:");
    scanf("%f",&principle);

    float RateOfInterest=10;
    printf("Enter rate of interest:");
    scanf("%f",&RateOfInterest);

    float time=2;
    printf("Enter time of interest:");
    scanf("%f",&time);

    float SI=(principle * RateOfInterest *
time)/100;
    float Amount=principle*pow(1 +
RateOfInterest/100,time);
    float CI=Amount-principle;

    printf("Simple interest=%f and Compound
interest=%f",SI,CI);

    return 0;
}
```

```c
//step 6
#include <stdio.h>
#include <math.h>

int main()
{
    float principle, RateOfInterest, time, SI, CI,
Amount;

    printf("Enter principle amount:");
    scanf("%f",&principle);

    printf("Enter rate of interest:");
    scanf("%f",&RateOfInterest);

    printf("Enter time of interest:");
    scanf("%f",&time);

    SI=(principle * RateOfInterest * time)/100;
    Amount=principle*pow(1 + RateOfInterest/100
,time);
    CI=Amount-principle;

    printf("Simple interest=%f and Compound
interest=%f",SI,CI);

    return 0;
}
```

Program 3:

Step 1

```
r=20
a=3.14*r*r
c=2*3.14*r
```

Step 2

```
float r=10;
float a=3.14*r*r;
float c=2*3.14*r;
```

```c
//step 3
#include <stdio.h>

int main()
{
    float r=10;

    float a=3.14 * r * r;
    float c=2 * 3.14 * r;

    printf("Area=%f and circumference=%f",a,c);

    return 0;
}
```

```c
//step 4
#include <stdio.h>

int main()
{
    int radius = 10;

    float area = 3.14 * radius * radius;
    float circumference = 2 * 3.14 * radius;

    printf("Area=%f and
circumference=%f",area,circumference);

    return 0;
}
```

```c
//step 5
#include <stdio.h>

int main()
{
    float radius;
    printf("Enter radius of circle:");
    scanf("%f",&radius);

    float area = 3.14 * radius * radius;
    float circumference = 2 * 3.14 * radius;

    printf("Area=%f and
circumference=%f",area,circumference);

    return 0;
}
```

```c
//step 6
#include <stdio.h>

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

    printf("Enter radius of circle:");
    scanf("%f",&radius);

    area = 3.14 * radius * radius;
    circumference = 2 * 3.14 * radius;

    printf("Area=%f and
circumference=%f",area,circumference);

    return 0;
}
```

Program 4:

Step 1

```
c=37
f=(9*c/5)+32
```

Step 2

```
float c=37;
float f=(9*c/5)+32;
```

```c
//step 3
#include <stdio.h>

int main()
{
    float c=37;

    float f=(9*c/5)+32;

    printf("Temperature in fahrenheit=%f",f);

    return 0;
}
```

```c
//step 4
#include <stdio.h>

int main()
{
    float centigrade=37;

    float fahrenheit=(9*centigrade/5)+32;

    printf("Temperature in
fahrenheit=%f",fahrenheit);

    return 0;
}
```

```c
//step 5
#include <stdio.h>

int main()
{
    float centigrade=37;
    printf("Enter temperature in centigrade:");
    scanf("%f",&centigrade);

    float fahrenheit=(9*centigrade/5)+32;

    printf("Temperature in
fahrenheit=%f",fahrenheit);

    return 0;
}
```

```c
//step 6
#include <stdio.h>

int main()
{
    float centigrade, fahrenheit;

    printf("Enter temperature in centigrade:");
    scanf("%f",&centigrade);

    fahrenheit=(9*centigrade/5)+32;

    printf("Temperature in
fahrenheit=%f",fahrenheit);

    return 0;
}
```

Program 5:

Step 1

a=10
b=20

c=a
a=b
b=c

Step 2

int a=10;
int b=20;
int c=a;
a=b;
b=c;

```c
//step 3
#include <stdio.h>

int main()
{
    int a=10;
    int b=20;

    int c=a;
    a=b;
    b=c;

    printf("New values are %d and %d",a,b);

    return 0;
}
```

```c
//step 4
#include <stdio.h>

int main()
{
    int firstNum=10;
    int secondNum=20;

    int thirdNum = firstNum;
    firstNum = secondNum;
    secondNum = thirdNum;

    printf("New values are %d and
%d",firstNum,secondNum);

    return 0;
}
```

```c
//step 5
#include <stdio.h>

int main()
{
    int firstNum=10;
    printf("Enter first number:");
    scanf("%d",&firstNum);

    int secondNum=20;
    printf("Enter second number:");
    scanf("%d",&secondNum);

    int thirdNum = firstNum;
    firstNum = secondNum;
    secondNum = thirdNum;

    printf("New values are %d and
%d",firstNum,secondNum);

    return 0;
}
```

```c
//step 6
#include <stdio.h>

int main()
{
    int firstNum, secondNum, thirdNum;
    printf("Enter first number:");
    scanf("%d",&firstNum);

    printf("Enter second number:");
    scanf("%d",&secondNum);

    thirdNum = firstNum;
    firstNum = secondNum;
    secondNum = thirdNum;

    printf("New values are %d and
%d",firstNum,secondNum);

    return 0;
}
```

Program 6:

Step 1

```
a=10
b=20
if (a==b)
Numbers are equal
else
Numbers are not equal
```

Step 2

int a=10;
int b=20;
if (a==b)
Numers are equal
else
Numbers are not equal

```c
//step 3
#include <stdio.h>

int main()
{
    int a=10;
    int b=10;

    if (a==b)
    {
        printf("Numbers are equal");
    }

    else
    {
        printf("Numbers are not equal");
```

```c
    }
    return 0;
}
```

```c
//step 4
#include <stdio.h>

int main()
{
    int firstNum=10;
    int secondNum=10;

    if (firstNum==secondNum)
    {
        printf("Numbers are equal");
    }

    else
    {
        printf("Numbers are not equal");
```

```
    }
    return 0;
}
```

```
//step 5
#include <stdio.h>

int main()
{
    int firstNum;
    printf("Enter first number:");
    scanf("%d",&firstNum);

    int secondNum;
    printf("Enter second number:");
    scanf("%d",&secondNum);

    if (firstNum==secondNum)
    {
        printf("Numbers are equal");
```

```c
    }

    else
    {
        printf("Numbers are not equal");
    }
    return 0;
}
```

```c
//step 6
#include <stdio.h>

int main()
{
    int firstNum, secondNum;
    printf("Enter first number:");
    scanf("%d",&firstNum);

    printf("Enter second number:");
    scanf("%d",&secondNum);

    if (firstNum==secondNum)
    {
        printf("Numbers are equal");
    }
```

```
    else
    {
        printf("Numbers are not equal");
    }
    return 0;
}
```

Program 7:

```
                Step 1

a=10
b=20
c=30
if (a>b and a>c)
a is greatest
else if (b>a and b>c)
b is greatest
else
c is greatest
```

Step 2

```
int a=10;
int b=20;
int c=30;
if (a>b and a>c)
a is greatest
else if (b>a and b>c)
b is greatest
else
c is greatest
```

```c
//step 3
#include <stdio.h>

int main()
{
    int a=10;
    int b=20;
    int c=40;

    if (a>b & a>c)
    {
        printf("a is greatest");
    }

    else if (b>a & b>c)
    {
```

```c
        printf("b is greatest");
    }

    else
    {
        printf("c is greatest");
    }
    return 0;
}
```

```c
//step 4
#include <stdio.h>

int main()
{
    int firstNum=10;
    int secondNum=20;
    int thirdNum=40;

    if (firstNum > secondNum & firstNum >
thirdNum)
    {
        printf("First number is greatest");
    }
```

```c
        else if (secondNum > firstNum & secondNum >
thirdNum)
    {
        printf("Second number is greatest");
    }

    else
    {
        printf("Third number is greatest");
    }
    return 0;
}
```

```c
//step 5
#include <stdio.h>

int main()
{
    int firstNum;
    printf("Enter first number:");
    scanf("%d",&firstNum);

    int secondNum;
    printf("Enter second number:");
    scanf("%d",&secondNum);

    int thirdNum;
    printf("Enter third number:");
```

```c
    scanf("%d",&thirdNum);

    if (firstNum > secondNum & firstNum >
thirdNum)
    {
        printf("First number is greatest");
    }

    else if (secondNum > firstNum & secondNum >
thirdNum)
    {
        printf("second nuumber is greatest");
    }

    else
    {
        printf("Third number is greatest");
    }
    return 0;
}
```

```c
//step 6
#include <stdio.h>

int main()
{
    int firstNum, secondNum, thirdNum;
    printf("Enter first number:");
    scanf("%d",&firstNum);

    printf("Enter second number:");
    scanf("%d",&secondNum);

    printf("Enter third number:");
    scanf("%d",&thirdNum);
```

```c
    if (firstNum > secondNum & firstNum >
thirdNum)
    {
        printf("First number is greatest");
    }

    else if (secondNum > firstNum & secondNum >
thirdNum)
    {
        printf("second nuumber is greatest");
    }

    else
    {
        printf("Third number is greatest");
    }
    return 0;
}
```

Program 8:

Step 1

```
a=10
if (a%2==0)
a is even
else
a is odd
```

Step 2

```
int a=10;
if (a%2==0)
a is even
else
a is odd
```

```c
//step 3
#include <stdio.h>

int main()
{
    int a=10;

    if (a%2==0)
    {
        printf("Number is even");
    }

    else
    {
        printf("Number is odd");
```

```c
    }
    return 0;
}
```

```c
//step 4
#include <stdio.h>

int main()
{
    int Number = 10;

    if (Number%2==0)
    {
        printf("Number is even");
    }

    else
    {
        printf("Number is odd");
```

```c
    }
    return 0;
}
```

```c
//step 5
#include <stdio.h>

int main()
{
    int Number;
    printf("Enter a number:");
    scanf("%d",&Number);

    if (Number%2==0)
    {
        printf("Number is even");
    }

    else
```

```
    {
        printf("Number is odd");
    }
    return 0;
}
```

Program 9:

Step 1

y=10
if (y%4==0)
year is leap
else
year is not leap

Step 2

```
int y=10;
if (y%4==0)
year is leap
else
year is not leap
```

```c
//step 3
#include <stdio.h>

int main()
{
    int y=2024;

    if (y%4==0)
    {
        printf("It is leap year");
    }

    else
    {
        printf("It is not leap year");
```

```
    }
    return 0;
}
```

```
//step 4
#include <stdio.h>

int main()
{
    int year=2024;

    if (year%4==0)
    {
        printf("It is leap year");
    }

    else
    {
        printf("It is not leap year");
```

```c
    }
    return 0;
}
```

```c
//step 5
#include <stdio.h>

int main()
{
    int year;
    printf("Enter a year:");
    scanf("%d",&year);

    if (year%4==0)
    {
        printf("It is leap year");
    }

    else
```

```
    {
        printf("It is not leap year");
    }
    return 0;
}
```

Program 10:

Step 1

```
a=90
b=80
c=75
d=88
e=90
f=(a+b+c+d+e)/5
if (f>90 and f<=100)
A
else if (f>80 and f<=90)
B
else if (f>60 and f<=80)
C
else;
D
```

Step 2

```
int a=90;
int b=80;
int c=75;
int d=88;
int e=90;
float f=(a+b+c+d+e)/5;
if (f>90 and f<=100)
printf("A");
else if (f>80 and f<=90)
printf("B");
else if (f>60 and f<=80)
printf("C");
else
printf("D");
```

```c
//step 3
#include <stdio.h>

int main()
{
    int a=90;
    int b=90;
    int c=80;
    int d=89;
    int e=78;

    float f=(a + b + c + d + e)/5;

    if (f>90 & f<=100)
    {
```

```c
        printf("Grade=A");
    }

    else if (f>80 & f<=90)
    {
        printf("Grade=B");
    }

    else if (f>60 & f<=80)
    {
        printf("Grade=C");
    }

    else
    {
        printf("Grade=D");
    }
    return 0;
}
```

```c
//step 4
#include <stdio.h>

int main()
{
    int maths=90;
    int english=90;
    int hindi=80;
    int sst=89;
    int science=78;

    float percentage=(maths + english + hindi +
sst + science)/5;


    if (percentage>90 & percentage<=100)
```

```c
    {
        printf("Grade=A");
    }

    else if (percentage>80 & percentage<=90)
    {
        printf("Grade=B");
    }

    else if (percentage>60 & percentage<=80)
    {
        printf("Grade=C");
    }

    else
    {
        printf("Grade=D");
    }
    return 0;
}
```

```c
//step 5
#include <stdio.h>

int main()
{
    int maths;
    printf("Enter maths marks:");
    scanf("%d",&maths);

    int english;
    printf("Enter english marks:");
    scanf("%d",&english);

    int hindi;
    printf("Enter hindi marks:");
```

```c
    scanf("%d",&hindi);

    int sst;
    printf("Enter sst marks:");
    scanf("%d",&sst);

    int science;
    printf("Enter science marks:");
    scanf("%d",&science);

    float percentage=(maths + english + hindi +
sst + science)/5;

    if (percentage>90 & percentage<=100)
    {
        printf("Grade=A");
    }

    else if (percentage>80 & percentage<=90)
    {
        printf("Grade=B");
    }

    else if (percentage>60 & percentage<=80)
    {
        printf("Grade=C");
    }

    else
    {
```

```c
        printf("Grade=D");
    }
    return 0;
}
```

```c
//step 6
#include <stdio.h>

int main()
{
    int maths, english, hindi, sst, science;
    float percentage;

    printf("Enter maths marks:");
    scanf("%d",&maths);

    printf("Enter english marks:");
    scanf("%d",&english);
```

```c
    printf("Enter hindi marks:");
    scanf("%d",&hindi);

    printf("Enter sst marks:");
    scanf("%d",&sst);

    printf("Enter science marks:");
    scanf("%d",&science);

    percentage=(maths + english + hindi + sst +
science)/5;

    if (percentage>90 & percentage<=100)
    {
        printf("Grade=A");
    }

    else if (percentage>80 & percentage<=90)
    {
        printf("Grade=B");
    }

    else if (percentage>60 & percentage<=80)
    {
        printf("Grade=C");
    }

    else
    {
        printf("Grade=D");
```

```
    }
    return 0;
}
```

Program 11:

Step 1

```
a=10
b=30
o=+
case +
a+b
case -
a-b
case *
a*b
case /
a/b
case %
a%b
```

Step 2

```
int a=10;
int b=30;
char o='+';
case '+':
a+b;
break;
case '-':
a-b;
break;
case '*';
a*b;
break;
case '/';
a/b;
break;
case '%';
a%b;
break;
```

```c
//step 3
#include <stdio.h>

int main()
{
    int a=50;
    int b=10;
    char o='/';

    switch (o)
    {
        case '+':
            printf("%d",a+b);
            break;
        case '-':
            printf("%d",a-b);
            break;
        case '*':
            printf("%d",a*b);
            break;
        case '/':
            printf("%d",a/b);
            break;
        case '%':
            printf("%d",a%b);
            break;

    }
    return 0;
}
```

```c
//step 4
#include <stdio.h>

int main()
{
    int firstNum=50;
    int secondNum=10;
    char operand='+';

    switch (operand)
    {
        case '+':
            printf("%d",firstNum + secondNum);
            break;
        case '-':
            printf("%d",firstNum - secondNum);
            break;
        case '*':
            printf("%d",firstNum * secondNum);
            break;
        case '/':
            printf("%d",firstNum / secondNum);
            break;
        case '%':
            printf("%d",firstNum % secondNum);
            break;


    }
    return 0;

}
```

```c
//step 5
#include <stdio.h>

int main()
{
    int firstNum;
    printf("Enter first number:");
    scanf("%d",&firstNum);

    int secondNum;
    printf("Enter second number:");
    scanf("%d",&secondNum);

    char operand;
    printf("Enter an operand:");
    scanf("%c",&operand);

    switch (operand)
    {
        case '+':
            printf("%d",firstNum + secondNum);
            break;
        case '-':
            printf("%d",firstNum - secondNum);
            break;
        case '*':
            printf("%d",firstNum * secondNum);
            break;
        case '/':
            printf("%d",firstNum / secondNum);
```

```c
            break;
        case '%':
            printf("%d",firstNum % secondNum);
            break;


    }
    return 0;
}
```

```c
//step 6
#include <stdio.h>

int main()
{
    int firstNum, secondNum;
    char operand;

    printf("Enter first number:");
    scanf("%d",&firstNum);

    printf("Enter second number:");
    scanf("%d",&secondNum);

    printf("Enter an operand:");
    scanf("%c",&operand);

    switch (operand)
    {
        case '+':
            printf("%d",firstNum + secondNum);
            break;
        case '-':
            printf("%d",firstNum - secondNum);
            break;
        case '*':
            printf("%d",firstNum * secondNum);
            break;
        case '/':
            printf("%d",firstNum / secondNum);
```

```c
            break;
        case '%':
            printf("%d",firstNum % secondNum);
            break;


    }
    return 0;
}
```