```c
#include <stdio.h>

int main() {
    float a = 1, b = 2, c = 3, d = 4;

    printf("%f\n", (a + b) / (c + d) ); // 0.428571
    printf("%f\n", a + b / (c + d) ); // 1.285714
    printf("%f\n", (a + b) / c + d ); // 5.000000
    printf("%f\n", a * b / c * d ); // 2.666667
}
```

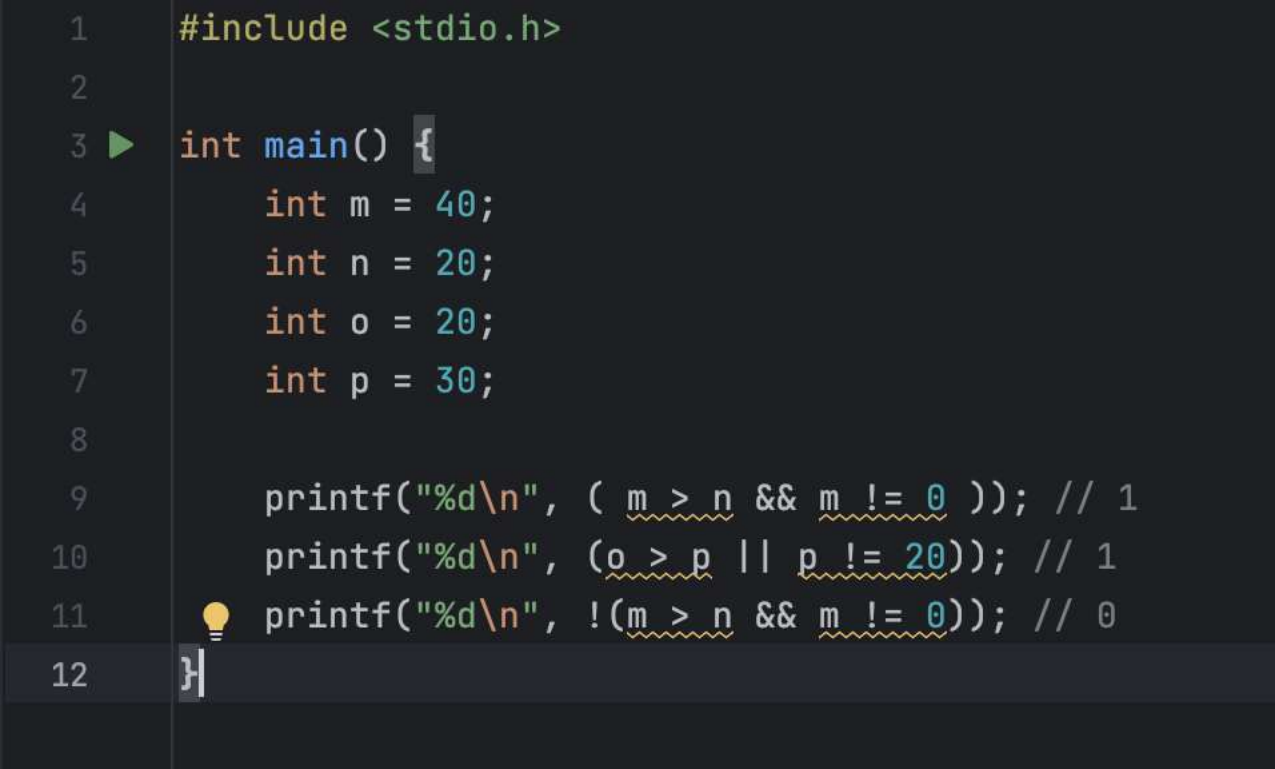
```
thathsara@thathsaras-MBP labsheet2 % make 1
gcc q1.c -o q1
./q1
0.428571
1.285714
5.000000
2.666667
```

```c
#include <stdio.h>

int main() {
    int a = 1;

    printf("%d\n", a ); // 1 - Variable a is initialized to be 1
    printf("%d\n", a++ ); // 1 - Variable a is returned first then incremented by 1
    printf("%d\n", ++a ); // 3 - Variable a is incremented by 1 and then returned
    printf("%d\n", a-- ); // 3 - Variable a  is returned first then decremented by 1
    printf("%d\n", --a ); // 1 - Variable a is decremented by 1 and then returned
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 2
gcc q2.c -o q2
./q2
1
1
3
3
1
```



```c
#include <stdio.h>

int main() {
    int m = 40;
    int n = 20;
    int o = 20;
    int p = 30;

    printf("%d\n", ( m > n && m != 0 )); // 1
    printf("%d\n", (o > p || p != 20)); // 1
    printf("%d\n", !(m > n && m != 0)); // 0
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 3
gcc q3.c -o q3
./q3
1
1
0
```

```c
#include <stdio.h>

int main() {
    char C = 'B';
    int i = 3, j = 3, k = 3;
    double x = 0.0, y = 2.3;

    printf("%s\n", i && j && k ? "true" : "false");
    printf("%s\n", x || i && j - 3 ? "true" : "false");
    printf("%s\n", i < j && x < y ? "true" : "false");
    printf("%s\n", i<j||x<y ? "true" : "false");
    printf("%s\n", 'A' <= C && C <= 'Z' ? "true" : "false");
    printf("%s\n", C - 1 == 'A' || C + 1 == 'Z' ? "true" : "false");
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 4
gcc q4.c -o q4
./q4
true
false
false
true
true
true
```

```c
#include <stdio.h>

int main() {
    int n;
    float x;

    printf("Enter X: ");
    scanf("%f", &x);

    printf("Enter N: ");
    scanf("%d", &n);

    float power = 1;
    for(int i = 0; i < n; i++) {
        power *= x;
    }

    printf("X^N = %f\n", power);
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 5
gcc q5.c -o q5
./q5
Enter X: 3
Enter N: 2
X^N = 9.000000
```

```c
#include <stdio.h>

int main() {
    float radius = 5.4;

    printf("Area = %f Square Units\n", radius * radius * 3.14);
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 6
gcc q6.c -o q6
./q6
Area = 91.562406 Square Units
```

```c
#include <stdio.h>

int main() {
    float inner_radius = 5, outer_radius = 7;

    printf("Area = %f Square Units\n", 3.14 * (outer_radius * outer_radius - inner_radius * inner_radius));
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 7
gcc q7.c -o q7
./q7
Area = 75.360000 Square Units
```

```c
#include <stdio.h>

int main() {
    float base_radius = 3.2;
    float height = 10.1;

    printf("Volume = %f Cubic Units\n", base_radius * base_radius * 3.14 * height);
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 8
gcc q8.c -o q8
./q8
Volume = 324.751395 Cubic Units
```

```c
#include <stdio.h>

int main() {
    float base_radius = 3.2;
    float height = 10.1;

    printf("Area without bases = %f Square Units\n", 2 * base_radius * 3.14 * height);
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 9
gcc q9.c -o q9
./q9
Area without bases = 202.969611 Square Units
```

```c
#include <stdio.h>

int main() {
    printf("Enter the number of years: ");

    float years;
    scanf("%f", &years);

    printf("Enter the number of days: ");

    float days;
    scanf("%f", &days);

    printf("Minutes = %f\n", (years * 365 + days) * 24 * 60);
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 10
gcc q10.c -o q10
./q10
Enter the number of years: 1
Enter the number of days: 45
Minutes = 590400.000000
```

```c
#include <stdio.h>

int main() {
    printf("What is your height in feet and inches: ");

    float feet, inch;
    scanf("%f %f", &feet, &inch);

    printf("Your height in centimeters is: %f\n", (feet * 12 + inch) * 2.54);
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 11
./q11
What is your height in feet and inches: 5 10
Your height in centimeters is: 177.800000
```

```c
#include <stdio.h>

int main() {
    printf("Temperature in Celsius: ");
    float celsius;
    scanf("%f", &celsius);

    printf("Temperature in fahrenheit: %f\n", celsius * 9 / 5 + 32);
}
```

```
thathsara@thathsaras-MBP labsheet2 % make 12
gcc q12.c -o q12
./q12
Temperature in Celsius: 100
Temperature in fahrenheit: 212.000000
```