

```

1  #include <stdio.h>
2
3  void main() {
4      float weight, height, bmi;
5
6      printf("Enter weight in kg: ");
7      scanf("%f", &weight);
8      printf("Enter height in meters: ");
9      scanf("%f", &height);
10
11     bmi = weight / (height * height);
12
13     printf("Your BMI is: %.2f\n", bmi);
14
15     if (bmi < 15) {
16         printf("Category: Starvation\n");
17     }
18     else if (bmi >= 15.1 && bmi <= 17.5) {
19         printf("Category: Anorexic\n");
20     }
21     else if (bmi >= 17.6 && bmi <= 18.5) {
22         printf("Category: Underweight\n");
23     }
24     else if (bmi >= 18.6 && bmi <= 24.9) {
25         printf("Category: Ideal\n");
26     }
27     else if (bmi >= 25 && bmi <= 29.9) {
28         printf("Category: Overweight\n");
29     }
30     else if (bmi >= 30 && bmi <= 39.9) {
31         printf("Category: Obese\n");
32     }
33     else if (bmi >= 40) {
34         printf("Category: Morbidly Obese\n");
35     }
36     else {
37         printf("Category: Undefined\n");
38     }
39 }
40

```

```
Enter weight in kg: 62
Enter height in meters: 1.78
Your BMI is: 19.57
Category: Ideal
```

```
1  #include <stdio.h>
2
3  void main() {
4      float x1, y1, x2, y2, x3, y3, area;
5
6      printf("Enter coordinates of first point (x1 y1): ");
7      scanf("%f %f", &x1, &y1);
8      printf("Enter coordinates of second point (x2 y2): ");
9      scanf("%f %f", &x2, &y2);
10     printf("Enter coordinates of third point (x3 y3): ");
11     scanf("%f %f", &x3, &y3);
12
13     area = (x1*(y2 - y3) + x2*(y3 - y1) + x3*(y1 - y2)) / 2.0;
14
15     if (area == 0) {
16         printf("The points are collinear.\n");
17     } else {
18         printf("The points are not collinear.\n");
19     }
20
21 }
22
23
```

```
Enter coordinates of first point (x1 y1): 43 34
Enter coordinates of second point (x2 y2): 72 34
Enter coordinates of third point (x3 y3): 16 13
The points are not collinear.
```

```
1  #include <stdio.h>
2
3  void main() {
4      int l1, b1, l2, b2, l3, b3;
5      int p1, p2, p3, max;
6
7      printf("Enter length and breadth of rectangle 1: ");
8      scanf("%d %d", &l1, &b1);
9      printf("Enter length and breadth of rectangle 2: ");
10     scanf("%d %d", &l2, &b2);
11     printf("Enter length and breadth of rectangle 3: ");
12     scanf("%d %d", &l3, &b3);
13
14     p1 = 2 * (l1 + b1);
15     p2 = 2 * (l2 + b2);
16     p3 = 2 * (l3 + b3);
17
18     max = (p1 > p2) ? ((p1 > p3) ? p1 : p3) : ((p2 > p3) ? p2 : p3);
19
20     printf("Perimeters are: %d, %d, %d\n", p1, p2, p3);
21     printf("The rectangle with the highest perimeter has: %d\n", max);
22
23 }
24
```

```
Enter length and breadth of rectangle 1: 54 15
Enter length and breadth of rectangle 2: 32 20
Enter length and breadth of rectangle 3: 43 13
Perimeters are: 138, 104, 112
The rectangle with the highest perimeter has: 138
```

```
#include <stdio.h>

void main() {
    float a, b, c;

    printf("Enter side a: ");
    scanf("%f", &a);
    printf("Enter side b: ");
    scanf("%f", &b);
    printf("Enter side c: ");
    scanf("%f", &c);

    if ((a + b > c) && (a + c > b) && (b + c > a)) {
        if (a == b && b == c) {
            printf("Equilateral Triangle\n");
        }
        else if (a == b || b == c || a == c) {
            printf("Isosceles Triangle\n");
        }
        else if ((a*a + b*b == c*c) || (b*b + c*c == a*a) || (a*a + c*c == b*b)) {
            printf("Right-Angled Triangle\n");
        }
        else {
            printf("Scalene Triangle\n");
        }
    }
    else {
        printf("Invalid triangle\n");
    }
}
```

```
Enter side a: 43
Enter side b: 23
Enter side c: 13
Invalid triangle
```



```
1  #include <stdio.h>
2
3  void main() {
4      int year, y, d;
5      printf("Enter year: ");
6      scanf("%d", &year);
7
8      y = year - 1;
9      d = (y + y/4 - y/100 + y/400 + 1) % 7;
10
11     printf("The day on 1st January %d is ", year);
12
13     if (d == 0)
14         printf("Monday\n");
15     else if (d == 1)
16         printf("Tuesday\n");
17     else if (d == 2)
18         printf("Wednesday\n");
19     else if (d == 3)
20         printf("Thursday\n");
21     else if (d == 4)
22         printf("Friday\n");
23     else if (d == 5)
24         printf("Saturday\n");
25     else if (d == 6)
26         printf("Sunday\n");
27
28 }
29
30
```

Enter year: 2017

The day on 1st January 2017 is Monday