

## WEEK 2

Write a program to read two integer values and print true if both the numbers end with the same digit, otherwise print false. Example: If 698 and 768 are given, program should print true as they both end with 8. Sample Input 1 25 53 Sample Output 1 false Sample Input 2 27 77 Sample Output 2 true

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main()
3 {
4     int a,b,c,d;
5     scanf("%d %d",&a,&b);
6     c=a%10;
7     d=b%10;
8     if (c==d)
9         printf("true");
10    else
11        printf("false");
12    return 0;
13 }
```

|   | Input | Expected | Got   |   |
|---|-------|----------|-------|---|
| ✓ | 25 53 | false    | false | ✓ |
| ✓ | 27 77 | true     | true  | ✓ |

Passed all tests! ✓

Not Weird

### Explanation

Sample Case 0:  $n = 3$

$n$  is odd and odd numbers are weird, so we print **Weird**.

Sample Case 1:  $n = 24$

$n > 20$  and  $n$  is even, so it isn't weird. Thus, we print **Not Weird**.

**Answer:** (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main()
3 {
4     int n;
5     scanf("%d",&n);
6     if (n%2==0)
7     {
8         if (n>=2 && n<=5)
9             printf("Not Weird");
10        else if (n>=5 && n<=20)
11            printf("Weird");
12        else
13            printf("Not Weird");
14    }
15    else
16        printf("Weird");
17    return 0;
18 }
```

|   | Input | Expected | Got   |   |
|---|-------|----------|-------|---|
| ✓ | 3     | Weird    | Weird | ✓ |

Three numbers form a Pythagorean triple if the sum of squares of two numbers is equal to the square of the third. For example, 3, 5 and 4 form a Pythagorean triple, since  $3^2 + 4^2 = 25 = 5^2$ . You are given three integers, a, b, and c. They need not be given in increasing order. If they form a Pythagorean triple, then print "yes", otherwise, print "no". Please note that the output message is in small letters. Sample Input 1 3 5 4 Sample Output 1 yes Sample Input 2 5 8 2 Sample Output 2 no

Answer: (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main()
3 {
4     int a,b,c,sum;
5     scanf("%d %d %d",&a,&b,&c);
6     if (a>b && a>c)
7     {
8         sum=(b*b)+(c*c);
9         if ((a*a)==sum)
10            printf("yes");
11        else
12            printf("no");
13    }
14    else if (b>a && b>c)
15    {
16        sum=(a*a)+(c*c);
17        if ((b*b)==sum)
18            printf("yes");
19        else
20            printf("no");
21    }
22    else
23    {
24        sum=(a*a)+(b*b);
25        if ((c*c)==sum)
26            printf("yes");
27        else
28            printf("no");
29    }
30    return 0;
31 }
```

|   | Input | Expected | Got |   |
|---|-------|----------|-----|---|
| ✓ | 3 5 4 | yes      | yes | ✓ |
| ✓ | 5 8 2 | no       | no  | ✓ |

### Sample Output 3

The number of sides is not supported.

**Answer:** (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main()
3 {
4     int x;
5     scanf("%d",&x);
6     switch (x)
7     {
8         case 3:
9             printf("Triangle");
10            break;
11            case 4:
12                printf("Quadrilateral");
13                break;
14                case 5:
15                    printf("Pentagon");
16                    break;
17                    case 6:
18                        printf("Hexagon");
19                        break;
20                        case 7:
21                            printf("Heptagon");
22                            break;
23                            case 8:
24                                printf("Octagon");
25                                break;
26                                case 9:
27                                    printf("Nonagon");
28                                    break;
29                                    case 10:
30                                        printf("Decagon");
31                                        break;
32                                    default:
33                                        printf("The number of sides is not supported.");
34                                }
35            return 0;
36 }
```

|   | Input | Expected | Got      |   |
|---|-------|----------|----------|---|
| ✓ | 3     | Triangle | Triangle | ✓ |

Monkey

Sample Input 2

2010

Sample Output 2

Tiger

**Answer:** (penalty regime: 0 %)

```
1 #include <stdio.h>
2 const char* za[]={"Monkey","Rooster","Dog","Pig","Rat","Ox","Tiger","Hare","Dragon","Snake","Horse","Sheep"};
3 int main(){
4     int y;
5     scanf("%d",&y);
6     int zi = y%12;
7     printf("%s",za[zi]);
8 }
```

|   | Input | Expected | Got    |   |
|---|-------|----------|--------|---|
| ✓ | 2004  | Monkey   | Monkey | ✓ |
| ✓ | 2010  | Tiger    | Tiger  | ✓ |

Passed all tests! ✓

Sample Output 1

The square is black.

Sample Input 2

d 5

Sample Output 2

The square is white.

**Answer:** (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main(){
3     char c;
4     int p;
5     scanf("%c %d",&c,&p);
6     if (c=='a' || c=='c' || c=='e' || c=='g')
7     {
8         if (p==1 || p==3 || p==5 || p==7)
9             printf("The square is black.");
10        else
11            printf("The square is white.");
12    }
13    else
14    {
15        if (p==1 || p==3 || p==5 || p==7)
16            printf("The square is white.");
17        else
18            printf("The square is black.");
19    }
20    return 0;
21 }
```

|   | Input | Expected             | Got                  |   |
|---|-------|----------------------|----------------------|---|
| ✓ | a 1   | The square is black. | The square is black. | ✓ |
| ✓ | d 5   | The square is white. | The square is white. | ✓ |

18

6

2020

Sample Output 1

170

**Answer:** (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main(){
3     int d,m,y,doy,dof=28;
4     scanf("%d %d %d",&d,&m,&y);
5     doy=d;
6     if ((y%4==0 && y%100!=0) || (y%400==0))
7         dof=29;
8     switch(m){
9         case 2:doy+=31;break;
10        case 3:doy+=31+dof;break;
11        case 4:doy+=31+dof+31;break;
12        case 5:doy+=31+dof+31+30;break;
13        case 6:doy+=31+dof+31+30+31;break;
14        case 7:doy+=31+dof+31+30+31+30;break;
15        case 8:doy+=31+dof+31+30+31+30+31;break;
16        case 9:doy+=31+dof+31+30+31+30+31+31;break;
17        case 10:doy+=31+dof+31+30+31+30+31+31+30;break;
18        case 11:doy+=31+dof+31+30+31+30+31+31+30+31;break;
19        case 12:doy+=31+dof+31+30+31+30+31+31+30+31+30;break;
20    }
21    printf("%d",doy);
22    return 0;
23 }
```

|   | Input           | Expected | Got |   |
|---|-----------------|----------|-----|---|
| ✓ | 18<br>6<br>2020 | 170      | 170 | ✓ |

#### Sample Output 4

0

Explanation:

- First is output of area of rectangle
- Then, output of area of triangle
- Then output of area square
- Finally, something random, so we print 0

**Answer:** (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main(){
3     int a,b,d=0;
4     char c;
5     scanf("%c %d %d",&c,&a,&b);
6     switch(c){
7         case 'T': printf("%d",(a*b));break;
8         case 'S': printf("%d",((a*b)/2));break;
9         case 'R': printf("%d",(a*b));break;
10        default: printf("%d",d);
11    }
12    return 0;
13 }
```

|   | Input         | Expected | Got |   |
|---|---------------|----------|-----|---|
| ✓ | T<br>10<br>20 | 200      | 200 | ✓ |



Contain a number n ( $0 < n$ )

Output format: Print the name of the day you are arriving on

Example Input

7

Example Output

Kryptonday

Example Input

1

Example Output Monday

**Answer:** (penalty regime: 0 %)

```
1 #include <stdio.h>
2 int main(){
3     int n,i;
4     scanf("%d",&n);
5     i=(n%296)%10;
6     switch(i){
7         case 0: printf("Sunday");break;
8         case 1: printf("Monday");break;
9         case 2: printf("Tuesday");break;
10        case 3: printf("Wednesday");break;
11        case 4: printf("Thursday");break;
12        case 5: printf("Friday");break;
13        case 6: printf("Saturday");break;
14        case 7: printf("Kryptonday");break;
15        case 8: printf("Coluday");break;
16        case 9: printf("Daxamday");break;
17    }
18    return 0;
19 }
```

|   | Input | Expected   | Got        |   |
|---|-------|------------|------------|---|
| ✓ | 7     | Kryptonday | Kryptonday | ✓ |
| ✓ | 1     | Monday     | Monday     | ✓ |

Passed all tests! ✓