

**Started on** Tuesday, 26 August 2025, 12:35 PM

**State** Finished

**Completed on** Friday, 29 August 2025, 4:21 PM

**Time taken** 3 days 3 hours

**Marks** 5.00/5.00

**Grade** **100.00** out of 100.00

**Question 1** | Correct Mark 1.00 out of 1.00

A number is considered to be ugly if its only prime factors are 2, 3 or 5.

[1, 2, 3, 4, 5, 6, 8, 9, 10, 12, 15, ...] is the sequence of ugly numbers.

Task:

complete the function which takes a number n as input and checks if it's an ugly number.

return ugly if it is ugly, else return not ugly

Hint:

An ugly number U can be expressed as:  $U = 2^a * 3^b * 5^c$ , where a, b and c are nonnegative integers.

**For example:**

| Test                 | Result   |
|----------------------|----------|
| print(checkUgly(6))  | ugly     |
| print(checkUgly(21)) | not ugly |

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

Reset answer

```

1 def checkUgly(n):
2     while n%2==0:
3         n=n//2
4     while n%3==0:
5         n=n//3
6     while n%5==0:
7         n=n//5
8     if n==1:
9         return('ugly')
10    else:
11        return('not ugly')
12

```

|   | Test                 | Expected | Got      |   |
|---|----------------------|----------|----------|---|
| ✓ | print(checkUgly(6))  | ugly     | ugly     | ✓ |
| ✓ | print(checkUgly(21)) | not ugly | not ugly | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 2** | Correct Mark 1.00 out of 1.00

Write a function that returns the value of  $a+aa+aaa+aaaa$  with a given digit as the value of  $a$ .

Suppose the following input is supplied to the program:

9

Then, the output should be:

$9+99+999+9999=11106$

Sample Input Format:

9

Sample Output format:

11106

**For example:**

| Test                             | Result |
|----------------------------------|--------|
| <code>print(Summation(8))</code> | 9872   |

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

[Reset answer](#)

```

1 def Summation(n):
2     s=n
3     c=0
4     while n!=0:
5         n=n//10
6         c=c+1
7         a=((s*(10**c))+s)
8         b=((a*(10**c))+s)
9         c=((b*(10**c))+s)
10        sum=s+a+b+c
11        return sum

```

|   | Test                              | Expected | Got      |   |
|---|-----------------------------------|----------|----------|---|
| ✓ | <code>print(Summation(8))</code>  | 9872     | 9872     | ✓ |
| ✓ | <code>print(Summation(10))</code> | 10203040 | 10203040 | ✓ |

Passed all tests! ✓

[Correct](#)

Marks for this submission: 1.00/1.00.

**Question 3** | Correct Mark 1.00 out of 1.00

An e-commerce company plans to give their customers a special discount for Christmas.

They are planning to offer a flat discount. The discount value is calculated as the sum of all the prime digits in the total bill amount.

Write an algorithm to find the discount value for the given total bill amount.

Constraints

$1 \leq \text{orderValue} < 10e100000$

Input

The input consists of an integer `orderValue`, representing the total bill amount.

Output

Print an integer representing the discount value for the given total bill amount.

Example Input

578

Output

12

**For example:**

| Test                                       | Result |
|--|--------|
| <code>print(christmasDiscount(578))</code> | 12     |

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

[Reset answer](#)

```

1 def christmasDiscount(n):
2     sum=0
3     while n!=0:
4         m=n%10
5         if (m==2 or m==3 or m==5 or m==7):
6             sum=sum+m
7         n=n//10
8     return (sum)
9

```

|   | Test   | Expected | Got |   |
|---|--|----------|-----|---|
| ✓ | <code>print(christmasDiscount(578))</code>   | 12       | 12  | ✓ |
| ✓ | <code>print(christmasDiscount(57))</code>    | 12       | 12  | ✓ |
| ✓ | <code>print(christmasDiscount(222))</code>   | 6        | 6   | ✓ |
| ✓ | <code>print(christmasDiscount(77777))</code> | 35       | 35  | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.

**Question 4** | Correct Mark 1.00 out of 1.00

complete function to implement coin change making problem i.e. finding the minimum number of coins of certain denominations that add up to given amount of money.

The only available coins are of values 1, 2, 3, 4

Input Format:

Integer input from stdin.

Output Format:

return the minimum number of coins required to meet the given target.

Example Input:

16

Output:

4

Explanation:

We need only 4 coins of value 4 each

Example Input:

25

Output:

7

Explanation:

We need 6 coins of 4 value, and 1 coin of 1 value

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

[Reset answer](#)

```

1 def coinChange(n):
2     c=0
3     while n>=4:
4         n-=4
5         c+=1
6     if n==3:
7         n-=3
8         c+=1
9     if n==2:
10        n-=2
11        c+=1
12    if n==1:
13        c+=1
14    return c

```

|   | Test                  | Expected | Got |   |
|---|-----------------------|----------|-----|---|
| ✓ | print(coinChange(16)) | 4        | 4   | ✓ |

Passed all tests! ✓

[Correct](#)

Marks for this submission: 1.00/1.00.

**Question 5** | Correct Mark 1.00 out of 1.00

A strobogrammatic number is a number that looks the same when rotated 180 degrees (looked at upside down).

Write a program to determine if a number is strobogrammatic. The number is represented as a string.

**Example 1:****Input:**

69

**Output:**

true

**Example 2:****Input:**

88

**Output:**

true

**Example 3:****Input:**

962

**Output:**

false

**Example 4:****Input:**

1

**Output:**

true

**For example:**

| Test                        | Result |
|-----------------------------|--------|
| print(Strobogrammatic(69))  | True   |
| print(Strobogrammatic(962)) | False  |

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

Reset answer

```

1 def Strobogrammatic(n):
2     n=str(n)
3     l=0
4     r=len(n)-1
5     while l<=r:
6         if (n[l]=='1') or (n[l]=='0' and n[r]=='0') or \
7             (n[l]=='8' and n[r]=='8') or (n[l]=='6' and n[r]=='9') or (n[l]=='9' and n[r]=='6'):
8             return True
9         else:
10            return False
11
12

```

|   | Test                        | Expected | Got   |   |
|---|-----------------------------|----------|-------|---|
| ✓ | print(Strobogrammatic(69))  | True     | True  | ✓ |
| ✓ | print(Strobogrammatic(88))  | True     | True  | ✓ |
| ✓ | print(Strobogrammatic(962)) | False    | False | ✓ |
| ✓ | print(Strobogrammatic(66))  | False    | False | ✓ |

Passed all tests! ✓

Correct

Marks for this submission: 1.00/1.00.