12. Write a program to find the perfect number.

```
def is_perfect_number(num):
    sum_divisors = 0
    for i in range(1, num):
        if num % i == 0:
            sum_divisors += i
    return sum_divisors == num
def find_perfect_numbers(limit):
    perfect_numbers = []
    for i in range(1, limit + 1):
        if is_perfect_number(i):
            perfect_numbers.append(i)
    return perfect_numbers
limit = 10000
perfect_numbers = find_perfect_numbers(limit)
print("Perfect numbers up to", limit, "are:", perfect_numbers)
```

output:

```
Perfect numbers up to 1001 are: [6, 28, 496]

=== Code Execution Successful ===
```

timecompexity:O(n $\sqrt{n}$)