

## 100 Basic Python Problems on Operators and Conditionals

1. Write a program to add two numbers.
2. Write a program to subtract two numbers.
3. Write a program to multiply two numbers.
4. Write a program to divide two numbers.
5. Write a program to find the remainder when one number is divided by another.
6. Write a program to find the power of a number.
7. Write a program to find the square root of a number.
8. Write a program to check if a number is even or odd.
9. Write a program to check if a number is positive, negative, or zero.
10. Write a program to find the largest of three numbers.
11. Write a program to find the smallest of three numbers.
12. Write a program to check if a number is divisible by 5 and 11.
13. Write a program to check if a year is a leap year.
14. Write a program to check if a character is a vowel or consonant.
15. Write a program to check if a character is an alphabet, digit, or special character.
16. Write a program to find the largest of two numbers.
17. Write a program to find the smallest of two numbers.
18. Write a program to check if a number is a palindrome.
19. Write a program to find the factorial of a number.
20. Write a program to find the sum of the digits of a number.
21. Write a program to find the reverse of a number.
22. Write a program to check if a number is an Armstrong number.
23. Write a program to find the GCD of two numbers.
24. Write a program to find the LCM of two numbers.

25. Write a program to check if a number is prime.
26. Write a program to print all prime numbers between two given numbers.
27. Write a program to print the Fibonacci series up to n terms.
28. Write a program to find the sum of the first n natural numbers.
29. Write a program to find the sum of the first n even numbers.
30. Write a program to find the sum of the first n odd numbers.
31. Write a program to find the largest digit in a number.
32. Write a program to find the smallest digit in a number.
33. Write a program to find the average of n numbers.
34. Write a program to find the sum of n numbers.
35. Write a program to find the difference between the largest and smallest number in a list.
36. Write a program to check if a number is a perfect number.
37. Write a program to find the HCF of two numbers.
38. Write a program to check if a number is a strong number.
39. Write a program to find the sum of the series  $1 + \frac{1}{2} + \frac{1}{3} + \dots + \frac{1}{n}$ .
40. Write a program to find the sum of the series  $1^2 + 2^2 + 3^2 + \dots + n^2$ .
41. Write a program to find the sum of the series  $1^3 + 2^3 + 3^3 + \dots + n^3$ .
42. Write a program to find the sum of the series  $1 + 2 + 4 + 8 + \dots + 2^n$ .
43. Write a program to print the multiplication table of a given number.
44. Write a program to print all even numbers between 1 and 100.
45. Write a program to print all odd numbers between 1 and 100.
46. Write a program to find the sum of all even numbers between 1 and 100.
47. Write a program to find the sum of all odd numbers between 1 and 100.
48. Write a program to print the factors of a given number.
49. Write a program to check if a number is a composite number.
50. Write a program to find the n-th Fibonacci number.

51. Write a program to find the sum of the squares of the digits of a number.
52. Write a program to find the sum of the cubes of the digits of a number.
53. Write a program to check if a number is a palindrome without converting it to a string.
54. Write a program to find the sum of the first n Fibonacci numbers.
55. Write a program to find the product of the first n natural numbers.
56. Write a program to find the product of the first n even numbers.
57. Write a program to find the product of the first n odd numbers.
58. Write a program to find the sum of the first n prime numbers.
59. Write a program to find the product of the digits of a number.
60. Write a program to find the difference between the sum of the squares and the square of the sum of the digits of a number.
61. Write a program to check if a number is an automorphic number.
62. Write a program to check if a number is a Harshad number.
63. Write a program to find the sum of the first n terms of the series  $1 + \frac{1}{2} + \frac{1}{4} + \frac{1}{8} + \dots$ .
64. Write a program to find the sum of the first n terms of the series  $1 - \frac{1}{2} + \frac{1}{3} - \frac{1}{4} + \dots$ .
65. Write a program to find the sum of the first n terms of the series  $1 + \frac{1}{2!} + \frac{1}{3!} + \dots$ .
66. Write a program to find the sum of the first n terms of the series  $1^2 + 2^2 + 3^2 + \dots$ .
67. Write a program to find the sum of the first n terms of the series  $1^3 + 2^3 + 3^3 + \dots$ .
68. Write a program to print all prime numbers less than n.
69. Write a program to print all composite numbers less than n.
70. Write a program to find the sum of all prime numbers less than n.
71. Write a program to find the sum of all composite numbers less than n.
72. Write a program to find the product of all prime numbers less than n.
73. Write a program to find the product of all composite numbers less than n.
74. Write a program to check if a number is a happy number.
75. Write a program to check if a number is a Kaprekar number.
76. Write a program to check if a number is a Keith number.

77. Write a program to check if a number is a Smith number.
78. Write a program to find the sum of the proper divisors of a number.
79. Write a program to check if a number is a deficient number.
80. Write a program to check if a number is an abundant number.
81. Write a program to find the n-th triangular number.
82. Write a program to find the n-th pentagonal number.
83. Write a program to find the n-th hexagonal number.
84. Write a program to check if a number is a triangular number.
85. Write a program to check if a number is a pentagonal number.
86. Write a program to check if a number is a hexagonal number.
87. Write a program to find the sum of the digits of the n-th Fibonacci number.
88. Write a program to find the product of the digits of the n-th Fibonacci number.
89. Write a program to find the difference between the sum of the digits of the n-th Fibonacci number and t
90. Write a program to find the sum of the digits of the n-th triangular number.
91. Write a program to find the product of the digits of the n-th triangular number.
92. Write a program to check if the sum of the digits of a number is prime.
93. Write a program to check if the product of the digits of a number is prime.
94. Write a program to find the sum of the digits of the product of two numbers.
95. Write a program to find the product of the digits of the sum of two numbers.
96. Write a program to find the sum of the squares of the digits of the sum of two numbers.
97. Write a program to find the sum of the cubes of the digits of the sum of two numbers.
98. Write a program to find the product of the squares of the digits of the product of two numbers.
99. Write a program to find the product of the cubes of the digits of the product of two numbers.
100. Write a program to find the sum of the squares of the digits of the product of two numbers.