

```

1  # function
2  def f(x): new *
3      y = x * x
4      return y
5  print("f(1) = " , f(1))
6  print("f(0) = " , f(0))
7  print("f(2) = " , f(2))
8
9  # 10-2
10 def Celsius_to_Fahrenheit(x): 1 usage new *
11     F = 9 / 5 * x + 32
12     return F
13
14 t = eval(input("Please enter temperature in Celsius: "))
15 print("The temperature is: ", Celsius_to_Fahrenheit(t))
16
17 # 10-3
18 import math
19 def Cnk(n, k): 3 usages new *
20     coeff = math.factorial(n) / (math.factorial(k) * math.factorial(n - k))
21     return int(coeff)
22
23 print("C(5, 3)", Cnk(n: 5, k: 3))
24 print("C(5, 3)", Cnk(n= 5, k = 3))
25 print("C(5, 3)", Cnk(k = 3, n = 5))
26

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27 # 10-4
28 def Cnk(n = 5, k = 3 ): 2 usages new *
29     coeff = math.factorial(n) / (math.factorial(k) * math.factorial(n - k))
30     return int(coeff)
31 print("C(5, 3)", Cnk())
32 print("C(6, 4)", Cnk( n: 6, k: 4))
33
34 # 10-5
35 def f(x): new *
36     y = x * x
37     return y
38
39 # 10-6
40 def ff(x): new *
41     x = x + 1
42     print("The value of x in function is: ", x)
43
44 def main(): new *
45     # 10-5
46     print("f(1) = ", f(1))
47     print("f(0) = ", f(0))
48     print("f(-1) = ", f(-1))
49
50     # 10-6
51     x = 1
52     print("The value of x before function call is: ", x)
53     f(x)
54     print("The value of x after function call is: ", x)
55

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55
56 # 10-7
57 def isPrime(n): 2 usages new *
58     for i in range(2, n//2 + 1):
59         if n % i == 0:
60             return False
61     return True
62
63 number = eval(input("Please enter a positive number: "))
64
65 if isPrime(number):
66     print("The entered number is Prime")
67 else:
68     print("The entered number is Not Prime")
69
70 # 10-8
71 num_of_prime = 0
72 n = 2
73 while num_of_prime < 50:
74     if isPrime(n):
75         print(format(n, "4d"), end=" ")
76         num_of_prime += 1
77         if num_of_prime % 10 == 0:
78             print()
79     n += 1

```

```

/usr/local/bin/python3.12 /Users/pengyenjia/Desktop/運算思維與程式設計/makeUp_Submission_py/4_29/課堂練習/11227130_資訊二甲_11227130_彭妍嘉 4_29.py
f(1) = 1
f(0) = 0
f(2) = 4
Please enter temperature in Celsius: 34
The temperature is: 93.2
C(5, 3) 10
C(5, 3) 10
C(5, 3) 10
C(5, 3) 10
C(6, 4) 15
Please enter a positive number: 4
The entered number is Not Prime
 2   3   5   7  11  13  17  19  23  29
31  37  41  43  47  53  59  61  67  71
73  79  83  89  97 101 103 107 109 113
127 131 137 139 149 151 157 163 167 173
179 181 191 193 197 199 211 223 227 229

Process finished with exit code 0

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