

```
print(10 + 5 * 2)
```

Q2.

```
print((10 + 5) * 2)
```

Q3.

```
print(18 / 4)
```

Q4.

```
print(18 // 4)
```

Q5.

```
print(2 ** 3 ** 2)
```

Q6.

```
x = 10
```

```
x += 5
```

```
print(x)
```

Q7.

```
x = 15
```

```
x /= 4
```

```
print(x)
```

Q8.

```
x = 4
```

```
x **= 1 + 2
```

```
print(x)
```

Q9.

```
print(5 < 3 < 7)
```

Q10.

```
print(10 == 10.0)
```

Q11.

```
print(True and False or True)
```

Q12.

```
print(not 8 > 3)
```

Q13.

```
print(10 > 5 and 5 < 3)
```

Q14.

```
print(5 & 3)
```

Q15.

```
print(5 | 3)
```

Q16.

```
print(5 ^ 3)
```

Q17.

```
print(8 >> 2 + 1)
```

Q18.

```
print(3 << 2)
```

Q19.

```
print('a' in 'apple')
```

Q20.

```
print(4 not in [1, 2, 3, 4])
```

Q21.

```
a = 10
```

```
b = 10
```

```
print(a is b)
```

Q22.

```
x = [1, 2, 3]
```

```
y = x
```

```
print(x is y)
```

Q23.

```
m = [1, 2]
```

```
n = [1, 2]
```

```
print(m is n)
```

Q24.

```
print(5 + 3 * 2 ** 2)
```

Q25.

```
print(4 & 3 == 0)
```

Q26.

```
print(True + False * 3)
```

Q27.

```
print(0 or 5 and 0 or 3)
```

Q28.

```
x = 5
```

```
print(x > 3 < 2 or x == 5)
```

Q29.

```
print(True ^ False ^ True)
```

Q30.

```
x = [1, 2, 3]
```

```
y = x
```

```
x += [4]
```

```
print(y)
```

```
print(6 & 3 | 2)
```

Q31.

```
print(10 ^ 4 & 3)
```

Q32.

```
print(16 >> 2 + 1)
```

Q10.

```
print(3 << 1 + 2)
```

Q32.

```
a = 12
```

```
b = 5
```

```
print(a & b, a | b)
```

Q33.

```
x = 7
```

```
x &= 3
```

```
print(x)
```

Q34.

```
x = 4
```

```
x |= 2
```

```
print(x)
```

Q35.

```
x = 5
```

```
x ^= 3
```

```
print(x)
```

Q36.

```
print(True & False | True)
```

Q37.

```
print(1 << 3 & 2)
```

Q38.

```
print(9 >> 1 & 3)
```

Q39.

```
print(~(3 << 2))
```

Q40.

```
print(5 & 3 == 1)
```

Q41.

```
print(6 ^ 2 << 1)
```

## loop

### 1.

```
for i in range(1, 6):
```

```
    print(i * 2)
```

2.

```
for i in range(5, 0, -1):
```

```
    print(i)
```

3.

```
i = 1
```

```
while i <= 5:
```

```
    print(i, end=" ")
```

```
    i += 2
```

4.

```
i = 5
```

```
while i > 0:
```

```
    print(i)
```

```
    i -= 2
```

5.

```
for i in range(5):
```

```
    if i % 2 == 0:
```

```
        print(i)
```

6.

```
for i in range(1, 6):
```

```
    if i == 3:
```

```
        break
```

```
    print(i)
```

7.

```
for i in range(1, 6):
```

```
    if i == 3:
```

```
        continue
```

```
    print(i)
```

8.

```
for i in range(3):
```

```
    for j in range(2):
```

```
        print(i, j)
```

9.

```
for i in range(1, 4):
    for j in range(1, i + 1):
        print(j, end=" ")
    print()
```

10.

```
for i in range(3):
    print(i)
else:
    print("Done")
```

11.

```
i = 1
while i < 5:
    if i == 3:
        break
    print(i)
    i += 1
else:
    print("Finished")
```

12.

```
x = 0
for i in range(1, 5):
    x += i
print(x)
```

13.

```
count = 0
for i in range(10):
    if i % 3 == 0:
        count += 1
print(count)
```

14.

```
for i in range(1, 5):  
    print(i)
```

```
    i += 1
```

15.

```
i = 0  
  
while i < 3:  
    print(i)  
    i += 1  
  
else:  
    print(i)
```

16.

```
for i in range(10, 4, -2):  
    print(i)
```

17.

```
i = 10  
  
while i > 0:  
    print(i, end=" ")  
    i //= 2
```

18.

```
lst = [2, 4, 6]  
  
for i in lst:  
    print(i * 2)
```

19.

```
lst = [1, 2, 3]  
  
for i in range(len(lst)):  
    print(lst[i])  
  
for i in range(1, 6):  
    if i == 4:  
        break
```

```
print(i)
```

20.

```
for i in range(5):
```

```
    if i % 2 == 0:
```

```
        break
```

```
    print(i)
```

•

```
for i in range(1, 6):
```

```
    if i == 3:
```

```
        continue
```

```
    print(i)
```

21.

```
for i in range(5):
```

```
    if i % 2 == 0:
```

```
        continue
```

```
    print(i)
```

22.

```
i = 1
```

```
while i <= 5:
```

```
    if i == 3:
```

```
        break
```

```
    print(i)
```

```
    i += 1
```

23.

•

```
i = 10
```

```
while i > 0:
```

```
print(i)
```

```
if i == 7:
```

```
    break
```

```
i -= 1
```

24.

```
i = 0
```

```
while i < 5:
```

```
    i += 1
```

```
    if i == 3:
```

```
        continue
```

```
    print(i)
```

25.

```
i = 0
```

```
while i < 5:
```

```
    i += 1
```

```
    if i % 2 == 0:
```

```
        continue
```

```
    print(i)
```

26.

•

```
for i in range(1, 4):
```

```
    for j in range(1, 4):
```

```
        if j == 2:
```

```
            break
```

```
        print(i, j)
```

27.

```
for i in range(1, 4):
```

```
    for j in range(1, 4):
```

```
        if j == 2:
```

```
            continue
```

```
print(i, j)

28.
```

```
for i in range(1, 4):
    if i == 3:
        break
    print(i)
else:
    print("Done")
```

29.

```
i = 1
while i < 4:
    i += 1
    if i == 3:
        continue
    print(i)
else:
    print("Finished")
```

30.

```
for i in range(5):
    if i == 2:
        continue
    elif i == 4:
        break
    print(i)
```

31.

```
i = 0
while i < 5:
```

```
i += 1

if i % 2 == 0:

    continue

if i == 5:

    break

print(i)
```

32.

```
for i in range(1, 6):

    for j in range(1, 6):

        if i * j > 6:

            break

        if j % 2 == 0:

            continue

        print(i, j)

for i in range(1, 4):

    if i % 2 == 0:

        continue

    print(i)

else:

    print("Done")
```

33.

```
i = 0

while i < 5:

    i += 1

    if i == 3:

        continue

    print(i)

else:
```

```
print("Finished")
```

34.

```
i = 0  
while i < 4:  
    i += 1  
    if i % 2 == 0:  
        continue  
    print(i)  
else:  
    print("Loop completed")
```

35.

```
for i in range(1, 4):  
    for j in range(1, 4):  
        if j == 2:  
            break  
        print(i, j)  
    else:  
        print("Inner loop done")
```

36.

```
for i in range(1, 4):  
    for j in range(1, 4):  
        if j == 2:  
            continue  
        print(i, j)  
    else:  
        print("Inner loop finished")
```

37.

```
for i in range(1, 5):
    if i == 4:
        break
    elif i == 2:
        continue
    print(i)
else:
    print("Loop completed")
```

38.

```
i = 0
while i < 5:
    i += 1
    if i % 2 == 0:
        continue
    if i == 5:
        break
    print(i)
else:
    print("Finished")
```

39.

```
for i in range(1, 4):
    for j in range(1, 4):
        if i * j > 4:
            break
        if j % 2 == 0:
            continue
        print(i, j)
```

```
else:
```

```
    print("Inner loop else")
```

40.

```
for i in range(5):
```

```
    pass
```

```
    print("Loop finished")
```

41.

```
for i in range(3):
```

```
    if i == 1:
```

```
        pass
```

```
        print(i)
```

42.

```
i = 0
```

```
while i < 3:
```

```
    pass
```

```
    i += 1
```

```
print("Done")
```

43.

```
x = 10
```

```
def func():
```

```
    print(x)
```

```
func()
```

44.

```
x = 5
```

```
def func():
```

```
    x = 10
```

```
print(x)
```

```
func()
```

```
print(x)
```

45.

```
x = 5
```

```
def func():
```

```
    global x
```

```
    x += 5
```

```
func()
```

```
print(x)
```

46.

```
x = 5
```

```
def func():
```

```
    x = 10
```

```
    x += 1
```

```
    print(x)
```

```
func()
```

```
print(x)
```

47.

```
x = 5
```

```
def func():
```

```
    global x
```

```
    x += 1
```

```
    print(x)
```

```
func()
```

```
print(x)
```

48.

```
def outer():
```

```
    x = 5
```

```
    def inner():
```

```
        nonlocal x
```

```
        x += 1
```

```
        print(x)
```

```
    inner()
```

```
    print(x)
```

```
outer()
```

49.

```
def outer():
```

```
    x = 5
```

```
    def inner():
```

```
        x = 10
```

```
        print(x)
```

```
    inner()
```

```
    print(x)
```

```
outer()
```

50.

```
def outer():
```

```
    x = 5
```

```
    def inner():
```

```
        global x
```

```
        x += 2
```

```
    inner()
```

```
print(x)
```

```
outer()
```

```
print(x)
```

51.

```
x = 10
```

```
for i in range(1):
```

```
    x = 20
```

```
print(x)
```

52.

```
if True:
```

```
    y = 30
```

```
print(y)
```

53.

```
x = 5
```

```
def func1():
```

```
    x = 10
```

```
    def func2():
```

```
        nonlocal x
```

```
        x += 5
```

```
        print(x)
```

```
    func2()
```

```
    print(x)
```

```
func1()
```

54.

```
x = 1
```

```
def a():
```

```
x = 2
```

```
def b():
```

```
    x = 3
```

```
    print(x)
```

```
    b()
```

```
    print(x)
```

```
a()
```

```
print(x)
```

55.

```
x = 0
```

```
def foo():
```

```
    x = x + 1
```

```
    print(x)
```

```
foo()
```

## functions

```
print(math.floor(1.6))
```

```
print(round(3.567, 2))
```

```
print(sorted([4, 1, 6, 3], reverse=True))
```

```
print(all([True, True, False]))
```

```
print(any([False, 0, [], None]))
```

```
print(list(range(5)))
```

```
print(chr(65))
```

```
print(ord('A'))
```

```
print(int('100'))
```

```
print(str(123))
```

```
print(eval('2 + 3 * 4'))
```

```
a = [1, 2, 3]
```

```
b = ['x', 'y', 'z']

print(list(zip(a, b)))
```

```
s = "python programming"

print(s.capitalize())

s = "python programming"

print(s.title())
```

```
s = "banana"

print(s.count('a'))

print(s.find('a'))

print(s.rfind('a'))

print(s.index('n'))

print(s.replace('a', 'o'))
```

```
s = " hello "

print(s.strip())

s = " hello "

print(s.lstrip())

print(s.rstrip())
```

```
s = "a,b,c"

print(s.split(','))

lst = ['a', 'b', 'c']

print('-'.join(lst))
```

```
s = "Python"

print(s.startswith('P'))

print(s.endswith('n'))
```

```
s = "12345"
```

```
print(s.isdigit())
```

```
s = "Pyth on"
```

```
print(s.isalpha())
```

```
s = "Python123"
```

```
print(s.isalnum())
```

```
s = "apple"
```

```
print(s.find('P'))
```

```
print(s.index('P'))
```

```
print(s.index('l'))
```

```
s = "Hello World"
```

```
print(s.split()[1])
```

```
s = "Python"
```

```
print('-'.join(s))
```