1.

```
x = 5
y = 2.0
z = x // y + x / y
print(type(z), z)
```

OUTPUT : <class 'float'> 4.5

2.

```
a = 2
b = 3
c = 4
result = a ** b * c // a + b % c
print(result)
```

OUTPUT : 19

3.

```
x = True
y = False
z = True
print(x and y or not z and x)
```

OUTPUT : False

4.

```
a = "100"
b = 25
print(a * 2 + str(b))
print(int(a) // b + len(a))
```

OUTPUT : 10010025

7

5.

```
x = 0.1 + 0.2
y = 0.3
print(x == y, round(x, 1) == y)
```

OUTPUT : False True

6.

```
num = 7
val = num + 2.0
```

```
print(type(val), val)

val = str(num) + "2"

print(val)
```

OUTPUT : <class 'float'> 9.0

72

7.

```
for_ = 10

while_ = 5

print(for_ + while_)
```

OUTPUT : 15

8.

```
x = 5

y = 10

z = x > y or y > x and not x == y

print(z)
```

OUTPUT : True

9.

```
a = "12.5"

b = int(float(a)) + bool("")

c = str(bool(a)) + str(bool(0))

print(b, c)
```

OUTPUT : 12 TrueFalse

10.

```
print(7 / 3, 7 // 3, -7 // 3)
```

OUTPUT : 2.3333333333333335 2 -3

11.

```
a = 10

b = 10

print(a is b, id(a), id(b))
```

OUTPUT : True 140683982759488 140683982759488

12.

```
x = 1000
```

```
y = 1000
print(x is y, id(x), id(y))
```

OUTPUT : True 140299743262128 140299743262128

13.

```
s1 = "hello"
s2 = "hello"
print(s1 is s2, id(s1), id(s2))
```

OUTPUT : True 140526185926192 140526185926192

14.

```
s1 = "Python!"
s2 = "".join(["Python!"])
print(s1 == s2, s1 is s2)
```

OUTPUT : True True

15.

```
a = 25
b = float(a)
print(type(a), type(b))
print(id(a), id(b))
```

OUTPUT : <class 'int'> <class 'float'>
139769508603936 139769505117424

16.

```
list1 = [1, 2, 3]
list2 = list1
list2.append(4)
print(id(list1), id(list2))
print(list1)
```

OUTPUT : 140210387233280 140210387233280
[1, 2, 3, 4]

17.

```
t1 = (1, 2, 3)
t2 = t1
print(id(t1), id(t2))
t2 = t2 + (4,)
```

```
print(id(t1), id(t2))
```

OUTPUT : 139928941640640 139928941640640

139928941640640 139928941372896

18.

```
print(id(True), id(1))
print(True == 1, True is 1)
```

OUTPUT : It return error as : SyntaxWarning: "is" with a literal.

19.

```
x = "123"
y = int(x)
z = int("123")
print(y == z, y is z)
```

OUTPUT : True True

20.

```
a = 5
b = 5.0
print(type(a), type(b))
print(a == b, a is b)
```

OUTPUT : <class 'int'> <class 'float'>

True False