In [1]:

```
print(repr(1.0))
```

1.0

In [2]:

```
print(repr(1.0 + 0.00000001))
```

1.00000001

In [3]:

```
print(repr(1.0 + 0.00000000000000000000000000000001))
```

1.0

In [4]:

```
a = 1.0
while (a + 1.0 > 1.0):
    a = a / 2.0
    print(a)

print('-------')
print(2*a)
```

0.5
0.25
0.125
0.0625
0.03125
0.015625
0.0078125
0.00390625
0.001953125
0.0009765625
0.00048828125
0.000244140625
0.0001220703125
6.103515625e-05
3.0517578125e-05
1.52587890625e-05
7.62939453125e-06
3.814697265625e-06
1.9073486328125e-06
9.5367431640625e-07
4.76837158203125e-07
2.384185791015625e-07
1.1920928955078125e-07
5.960464477539063e-08

```
2.9802322387695312e-08
1.4901161193847656e-08
7.450580596923828e-09
3.725290298461914e-09
1.862645149230957e-09
9.313225746154785e-10
4.656612873077393e-10
2.3283064365386963e-10
1.1641532182693481e-10
5.820766091346741e-11
2.9103830456733704e-11
1.4551915228366852e-11
7.275957614183426e-12
3.637978807091713e-12
1.8189894035458565e-12
9.094947017729282e-13
4.547473508864641e-13
2.2737367544323206e-13
1.1368683772161603e-13
5.684341886080802e-14
2.842170943040401e-14
1.4210854715202004e-14
7.105427357601002e-15
3.552713678800501e-15
1.7763568394002505e-15
8.881784197001252e-16
4.440892098500626e-16
2.220446049250313e-16
1.1102230246251565e-16
-------
2.220446049250313e-16
```

In [5]:

```
1.0 + 1.0934857019384750934185 7e-16
```

Out[5]:

```
1.0
```

In [7]:

```
20.0 + 1.0934857019384750934185 7e-15
```

Out[7]:

```
20.0
```

In [8]:

```
1.0 + 1.09348570193847509341857e-15
```

Out[8]:

```
1.000000000000001
```

In [ ]: