Q.1 Find two numbers such that each one is the square of the other.

Step 1:

Let the two numbers be x and y.

According to question.

- x is the square of y → x=y2
- y is the square of x → y=x2

So,

x=y2andy=x2

Step 2:

From the second equation: y=x2.

Put this into the first equation:

x=(x2)2

Step 3: Simplify

x=x4

Step 4:

$x4-x=0$

Factorize:

$x(x3-1)=0$

Step 5:

- Case 1: $x=0$ Then $y=x2=02=0$. So one solution is (0,0).
- Case 2: $x3-1=0 \Longrightarrow x3=1$. The real solution is $x=1$. Then $y=x2=12=1$. So another solution is (1,1).

Answer: 0 and 1

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