1)

The Euclidean algorithm is an [algorithm](https://simple.wikipedia.org/wiki/Algorithm). It can be used to find the biggest number that divides two other numbers (the greatest common divisor of two numbers).

The algorithm as an enumerated list

Start out with two positive [integers](https://simple.wikipedia.org/wiki/Integers) *m* and *n*.

1. If the value of *m* is less than the value of *n*, switch the values of *m* and *n*
2. Find a number *r* equal to *m* modulo *n*
3. Let *m* have the same value as *n*
4. Let *n* have the same value as *r*
5. If *n* does not have the value of 0, go to step 2
6. The wanted value is in *m*.

The algorithm in [pseudocode](https://simple.wikipedia.org/wiki/Pseudocode)

Note: This [pseudocode](https://simple.wikipedia.org/wiki/Pseudocode) uses [modular arithmetic](https://simple.wikipedia.org/wiki/Modular_arithmetic) instead of [subtraction](https://simple.wikipedia.org/wiki/Subtraction). It does the same thing as above, but gets the answer faster.

Precondition: two positive [integers](https://simple.wikipedia.org/wiki/Integers) *m* and *n*  
Postcondition: the greatest common [integer](https://simple.wikipedia.org/wiki/Integer) divisor of *m* and *n*

if m < n, swap(m,n)

while n does not equal 0

r = m mod n

m = n

n = r

endwhile

output m