

input: integers a and b

output: greatest common divisor of a and b

```
1  while  $a \neq b$  do  
2      if  $a > b$  then  
3           $a \leftarrow a - b$   
4      else  
5           $b \leftarrow b - a$   
6      end  
7  end  
8  return  $a$ 
```