
Algorithm 1 Euclid's algorithm

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1: procedure EUCLID( $a, b$ )                                ▷ The g.c.d. of  $a$  and  $b$ 
2:    $r \leftarrow a \bmod b$ 
3:   while  $r \neq 0$  do                                    ▷ We have the answer if  $r$  is 0
4:      $a \leftarrow b$ 
5:      $b \leftarrow r$ 
6:      $r \leftarrow a \bmod b$ 
7:   end while
8:   for <some condition> do
9:     <do stuff>
10:  end for
11:  return  $b$                                              ▷ The gcd is  $b$ 
12: end procedure
```
