

# 1 exp

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**Algorithm 1** Euclid's algorithm

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1: <b>procedure</b> EUCLID( $m, l$ )	▷ The g.c.d. of $m$ and $l$
2: $r \leftarrow m \bmod l$	
3: <b>while</b> $r \neq 0$ <b>do</b>	▷ We have the answer if $r$ is 0
4: $m \leftarrow l$	
5: $l \leftarrow r$	
6: $r \leftarrow m \bmod l$	
7: <b>while</b> $r \neq 0$ <b>do</b>	▷ We have the answer if $r$ is 0
8: $m \leftarrow l$	
9: $l \leftarrow r$	
10: $r \leftarrow m \bmod l$	
11: <b>return</b> $l$	▷ The g.c.d. is $l$

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