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MODULE *Euclid*

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EXTENDS *Integers*, *GCD*  
CONSTANTS  $M, N$

ASSUME  $\wedge M \in \text{Nat} \setminus \{0\}$   
 $\wedge N \in \text{Nat} \setminus \{0\}$

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```

--algorithm Euclid{
  variables  $x = M, y = N$ ;
  { while (  $x \neq y$  ) { if (  $x < y$  ) {  $y := y - x$  }
                        else {  $x := x - y$  }
                        } ;
  }
}

```

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\\* Modification History  
\\* Last modified Sat May 31 17:16:19 CST 2014 by *jing*  
\\* Created Sat May 31 16:03:52 CST 2014 by *jing*