

---

MODULE *euclid*

---

EXTENDS *Integers, Sequences*

VARIABLE  $x, y$

$Init \triangleq \begin{array}{l} \wedge x = 1024 \\ \wedge y = 400 \end{array}$

Euclid's Algorithm for finding the greatest common divisor of two numbers.

$Next \triangleq \begin{array}{l} \vee \wedge x > y \\ \quad \wedge x' = x - y \\ \quad \wedge y' = y \\ \vee \wedge y > x \\ \quad \wedge y' = y - x \\ \quad \wedge x' = x \end{array}$

$Invariant \triangleq x \neq y$

---

\ \* Modification History  
\ \* Last modified Sun *Apr* 21 20:19:33 *PDT* 2019 by *jasondebolt*  
\ \* Created Sun *Apr* 21 20:01:20 *PDT* 2019 by *jasondebolt*