

MODULE *GCD*

EXTENDS *Integers*

$Divides(p, n) \triangleq \exists q \in 1 \dots n : n = q * p$

$DivisorsOf(n) \triangleq \{p \in 1 \dots n : Divides(p, n)\}$

$SetMax(S) \triangleq \text{CHOOSE } i \in S : \forall j \in S : i \geq j$

$GCD(m, n) \triangleq SetMax(DivisorsOf(m) \cap DivisorsOf(n))$

\ * Modification History

\ * Last modified *Tue Dec 06 16:39:57 CST 2016* by *johir*

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