

```

|----- MODULE pgcd -----|
EXTENDS Naturals, TLC
CONSTANTS a, b
VARIABLES x, y
|-----|

ASSUME  $a \in Nat \wedge b \in Nat$ 
Init  $\triangleq x = a \wedge y = b$ 
|-----|

a1  $\triangleq x > y \quad \wedge x' = x - y \wedge y' = y$ 
a2  $\triangleq x < y \quad \wedge y' = y - x \wedge x' = x$ 
over  $\triangleq x = y \wedge x' = x \wedge y' = y$ 
|-----|

Next  $\triangleq a1 \vee a2 \vee over$ 
|-----|

Propriets de sret vrifier
test  $\triangleq x \neq y$ 
prop  $\triangleq x \geq 0$ 
prop2  $\triangleq x + y \leq a + b$ 
|-----|

```