

MODULE *appex1_2*

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EXTENDS Naturals, TLC
CONSTANTS a, b
VARIABLES x, y

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ASSUME a ∈ Nat ∧ b ∈ Nat
Init  $\triangleq$  x = a ∧ y = b

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```

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

```

```

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

```

Propriétés de sûreté à vérifier

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question  $\triangleq$  x  $\neq$  y
prop1  $\triangleq$  x  $\geq 0$  ∧ y  $\geq 0$ 
prop2  $\triangleq$  x + y  $\leq a + b$ 
prop  $\triangleq$  question
Check  $\triangleq$  prop2

```