

7. EUCLIDIAN ALGORITHM

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comment    Every pair of numbers a, b not both zero have a
             positive greatest common divisor: gcd;
procedure  EUC (a, b) =: (gcd)
begin
EUC:
if         (a = 0)
begin     gcd := b ; return end
if         (b = 0)
begin     gcd := a ; return end
             r2 := a
             r1 := b
here:     g := r2/r1
comment    Assumption is made that truncation takes place
             in the above statement;
             r := r2 - r1 × g
if         (r = 0)
begin     gcd := r1 ; return end
begin     r2 := r1
             r1 := r
             go to here end
integer   (g)
end
```