# kliman.pas

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## Contents



## 1 kliman

**program** *kliman* ;

start of with a functioning reproduction system in value terms

**type**
*components* =( *c* ,*v* ,*s* );
*sectors* =( *I* ,*IIa* ,*IIb* );

*flowmatrix* = **array** [*sectors* ,*components* ] **of** *real* ;
**const**
*repro* :*flowmatrix* =( ( 200,67,33),( 67,133,67),( 33,67,33));
**var**
Let *current*, *next* ∈ flowmatrix;
pi,pricetovalue,sellingprice: **array** [*sectors* ] **of** *real* ;
rate of profit Let *r* ∈ real;
Let *j* ∈ integer;
**procedure** *display* ; (see Section 2 )

**begin**
*next*← *repro*;
**writeln**(*repro*);
*current*← *repro*;
*display*;
**for** *j*← 0 **to** 40 **do** *begin* **begin**
*current*← *next*;
$r \leftarrow \frac{current_{I,s}+current_{IIa,s}+current_{IIb,s}}{\sum\sum current_{I..IIb,c..v}}$;

*pi* :=*r* *\+*current* [][*c* ..*v* ];

```
        sellingprice := pi + \+ current [][c ..v ];

        current [][s ]:=pi [iota 0];
        pricetovalue := sellingprice /\+repro [][c ..s ];
        next [][c ..v ]:=repro [][c ..v ]* ( pricetovalue );
        { if (j mod 5)=0 then }
        begin
            writeln ( 'time ,' ,j );
            display;
            writeln ( 'profit,' ,r );
        end ;
    end ;
end .
```

# 2 display

```
procedure display ;
var
    Let k ∈ sectors;
    Let t ∈ components;
    Let d ∈ real;
    totals: array [components ] of real ;
begin
    writeln ( 'Sector,c,v,s,living labour,output labour content,output price' );
    for k← l to llb do
    begin
        write ( k , ',' );
        for t← c to s do write ( current [k ,t ], ',' );
        d← repro_{k,v} + repro_{k,s};
        write ( d , ',' );
        d← ∑ repro_k ;
        write ( d , ',' );
        d← ∑ current_k ;
        writeln(d);
    end ;
    totals← ∑ current ^T ;
    writeln ( 'totals,' ,totals [ c ], ',' ,totals [ v ], ',' ,
    totals [ s ]);
end ;
```