; Gastaldi Paolo

; lab\_02, program\_2.s

; 22-10-19

; nella formula di Amdahl

; frazione: # colpi di clock

; v5 non contiene valori = 0

.data

v1: .double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6

v2: .double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6

v3: .double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6

v4: .double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6, 7, 8

.double 1, 2, 3, 4, 5, 6

v5: .space 240 ; = 8\*30

v6: .space 240 ; = 8\*30

.text

; r1: indice loop

; r2: indice vettori

; f1: registro valori v1

; f2: registro valori v2

; f3: registro valori v3

; f4: registro valori v4

; f5: registro valori v5

; f6: registro valori v6

main:

daddi r1, r0, 30

dadd r2, r0, r0

loop:

l.d f1, v1(r2)

l.d f2, v2(r2)

l.d f3, v3(r2)

l.d f4, v4(r2)

mul.d f7, f1, f2

add.d f5, f7, f3

s.d f5, v5(r2)

mul.d f8, f3, f4

div.d f6, f8, f5

s.d f6, v6(r2)

daddi r2, r2, 8

daddi r1, r1, -1

bnez r1, loop

halt