Functional simulator output is as follows:

Instruction counts:

Total number of instructions: 638
Arithmetic instructions: 333
Logical instructions: 50
Memory access instructions: 103
Control transfer instructions: 152

Final register state:

(Contents shown in decimal number system; not in base 16. In addition, only those registers are shown whose contents change during the program)

Program counter: 100
R1: 1200
R2: 1400
R3: 100
R4: 50
R5: 50
R6: 0
R7: 25
R8: 2550
R9: 1275
R10: 50
R11: 50
R12: 32

Final memory state:

(Contents shown in decimal number system; not in base 16. In addition, only those registers are shown whose contents change during the program)

Address: 1400, Contents: 25
Address: 1404, Contents: 2550
Address: 1408, Contents: 1275

Timing simulator output can be provided upon request.