RAT:

$s1 = A

$s2 = sum

$s3 = i

.data # data section

array\_a: .word 1, -3, 5, -7, 9, -11, 13, -15, 17, -19  
output\_a: .asciiz "Final Sum = "  
new\_line: .asciiz "\n"

.text # text section

.globl main # call main by SPIM

main:  
# out of loop when we got 10 numbers  
la   $t0, array\_a  
li   $t2, 0            # int i  
li   $t3, 0            # int sum

# sum all number in a array "a"  
loopA:  
# condition to terminal loop  
sltiu $t7, $t2, 20  
beq   $t7, $0, endA  
# load array to $t4  
lw    $t4, ($t0)  
addu $t3, $t3, $t4  
# advance $t0 by 4  
addiu   $t0, $t0, 4

multi $t0, $t0, 4

# i++  
addiu $t2, $t2, 1  
j loopA  
endA:

# print string "sum"  
la   $a0, output\_a  
li   $v0, 4  
syscall

#print Final Sum  
addu   $a0, $0, $t3  
li      $v0, 1  
syscall

# new line  
la   $a0, new\_line  
li   $v0, 4  
syscall

# reset `i` and `sum`  
li   $t2, 0            # int i  
li   $t3, 0            # int sum

# call exit once everything is done  
li   $v0, 10  
syscall