Registers:

$8 (testcase word)

$3 (like $0 has the value 0)

$4 (has value 2 to subtract from another register)

$5 (has value 1 to determine if the remainder is 1 so then it is odd #%#=1)

$10 (first counter)

$7 (second counter)

$9 (store bitwise and of all bits of testcase word before and after shifting)

$15 (store the parity bit)

Loops:

start

loop

loop2

evenbit

oddbit

exit