

4.39 lui \$t0, 0x2001
 ori \$t0, 0x4924
 add \$t1, \$t0, \$t0

4.40 It is possible since jump instructions can jump anywhere in text segment

4.41 It isn't possible since branching instructions cannot go higher than $\pm 2^{15}$ offset.
 The value at 4.39 is out of range for 0x00000600

$2^{15} =$ 32768

0x00000600 = +1536

 34304 -> the top cap for instructions

0x20014924 = 536955172 -> the target

536955172 > 34304 therefore the number is out of range

4.42 It is in range since the branching instructions is within the $\pm 2^{15}$ offset range.

$2^{15} =$ 32768

1FFFF000 = +536866816

 536899584 -> the top cap for instructions

0x20014924 = 536955172 -> the target

536955172 > 536899584 therefore the number is out of range