

4.13 Solution:

1) For Intel x86 instruction “ADD [eax], edx”:

FETCH – 100, DECODE – 1; EVALUATE ADDRESS – 1; FETCH OPERAND – 100;
EXECUTE – 1; STORE RESULT – 100. Thus, it takes **303 periods** in total.

2) For LC-3 instruction “ADD R6,R2,R6”:

FETCH – 100, DECODE – 1; FETCH OPERAND (from register files) – 1; EXECUTE –
1; STORE RESULT (into register files) – 1. Thus, it takes **104 periods** in total.