5.13

b) The lower bound for CPE is 3 because of floating point addition.

c) The lower bound is now 1 because of integer addition.

d) The CPE bounds are decided by addition latency bound and not multiplication latency bound. This is because multiplication need not be done in a strict ordering. In addition, the latency bound of floating point values is only valid if the operation is done in a strict ordering, but that is not the case since it’s not down in strict ordering.

6.29

a)

CT CT CT CT CT CT CT CT CI CI CO CO

11 10 9 8 7 6 5 4 3 2 1 0

b) MISS, HIT, HIT