

1. Consider this 8-stage pipeline:

IF	DE	RR	AL	AL	DM	DM	RW
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For each of the following pairs of instructions, how many stalls will the second instruction experience without bypassing? With bypassing?

1 ADD R1 + R2 -> R3
2 ADD R3 + R4 -> R5

1 LD [R1] -> R2
2 ADD R2 + R3 -> R4

1 LD [R1] -> R2
2 SD [R2] <- R3

1 LD [R1] -> R2
2 SD [R3] <- R2
