

Name: _____

Control Wires

Fill out the table below showing how each control wire should be set. Mark X for “don’t care”, if it doesn’t matter how the control wire is set. For `ALUop`, just write an operation instead of a number (e.g, “add”, “sub”, etc.)

Use this table with diagrams from the Patterson and Hennessey text:

Control Wire	add	addi	j	beq	lw	sw
RegDest						
Jump						
Branch						
MemRead						
MemToReg						
ALUop						
MemWrite						
ALUSrc						
RegWrite						

Use this table with diagrams from the Harris and Harris text:

Control Wire	add	addi	j	beq	lw	sw
Jump						
MemToReg						
MemWrite						
Branch						
ALUControl						
ALUSrc						
RegDest						
RegWrite						

Design a circuit to compute the value of the `jump` control wire

Design a circuit to compute the value of the `branch` control wire

Design a circuit to compute the value of the `regWrite` control wire