



- 00 = unsigned addition
- 01 = signed addition
- 10 = signed subtraction
- 11 = negate b (ignore a)

This circuit illustrates the use of a multiplexer by computing an "overflow" bit for four types of operations an adder may have been used to perform, and then selecting the correct overflow bit (according to the value of the two control bits coming into the multiplexer from the left).