Case	I0	I1	I2	S	Y
1	0	0	0	"00"	0
1	1	0	0	"00"	1
2	0	0	1	"01"	0
2	0	1	0	"01"	1
3	0	0	0	"10"	0
3	0	0	1	"10"	1

My propagation delay for this circuit and its 32 bit equivalent is 11 ns