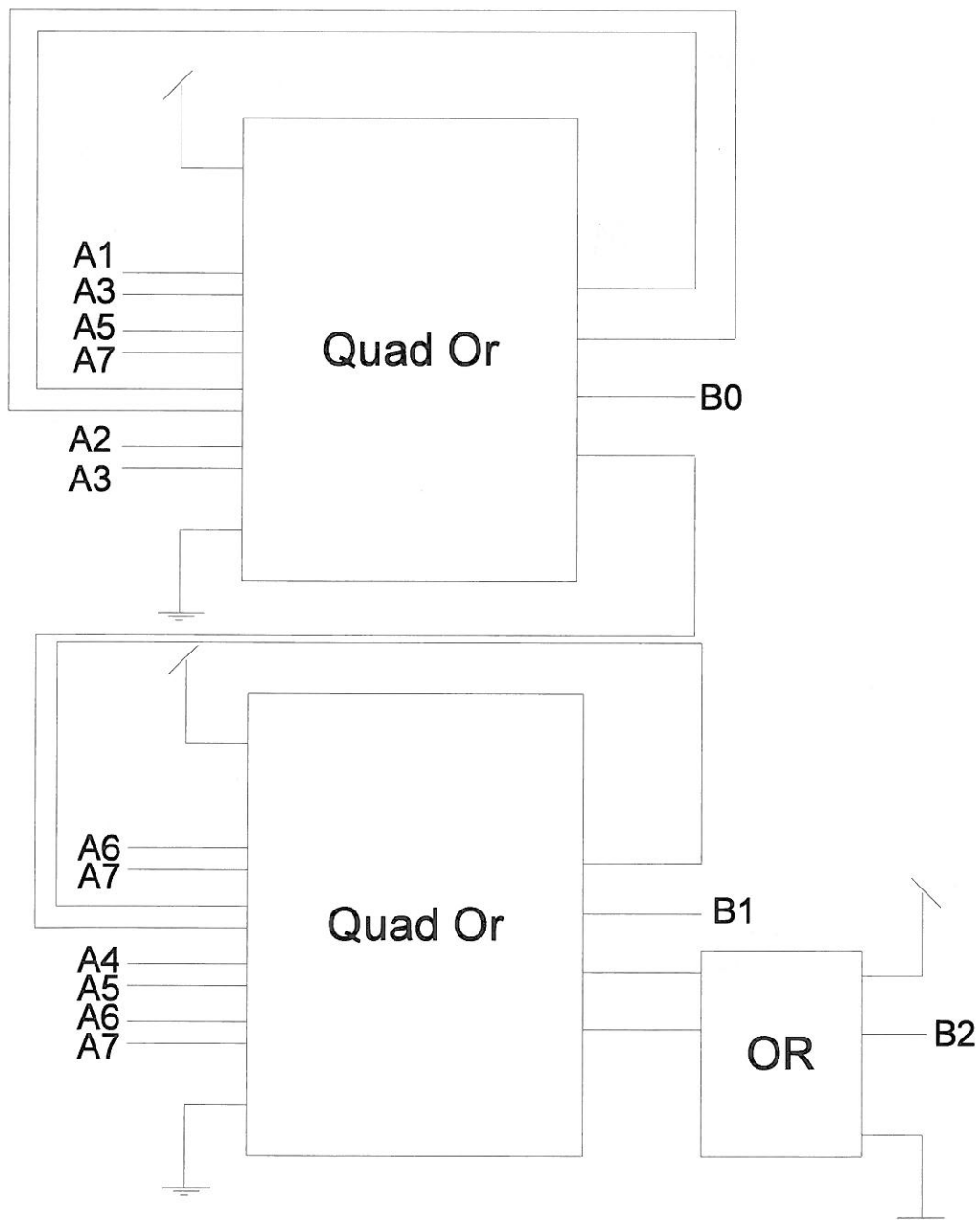


Why Are we Lecturing this Material?

Good to know? – Partly

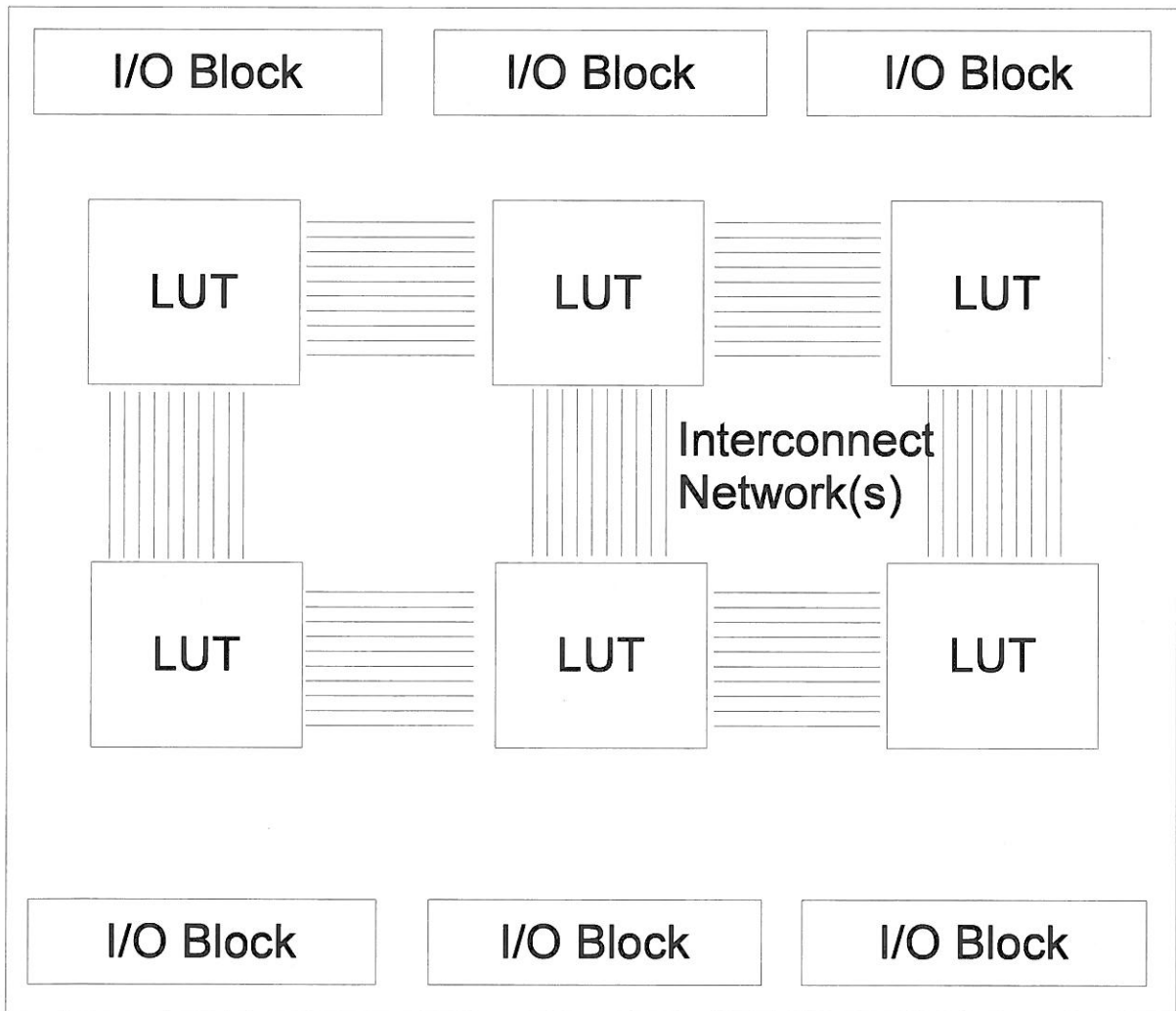
Turns out it's much more practical than that!

Encoder Implementation

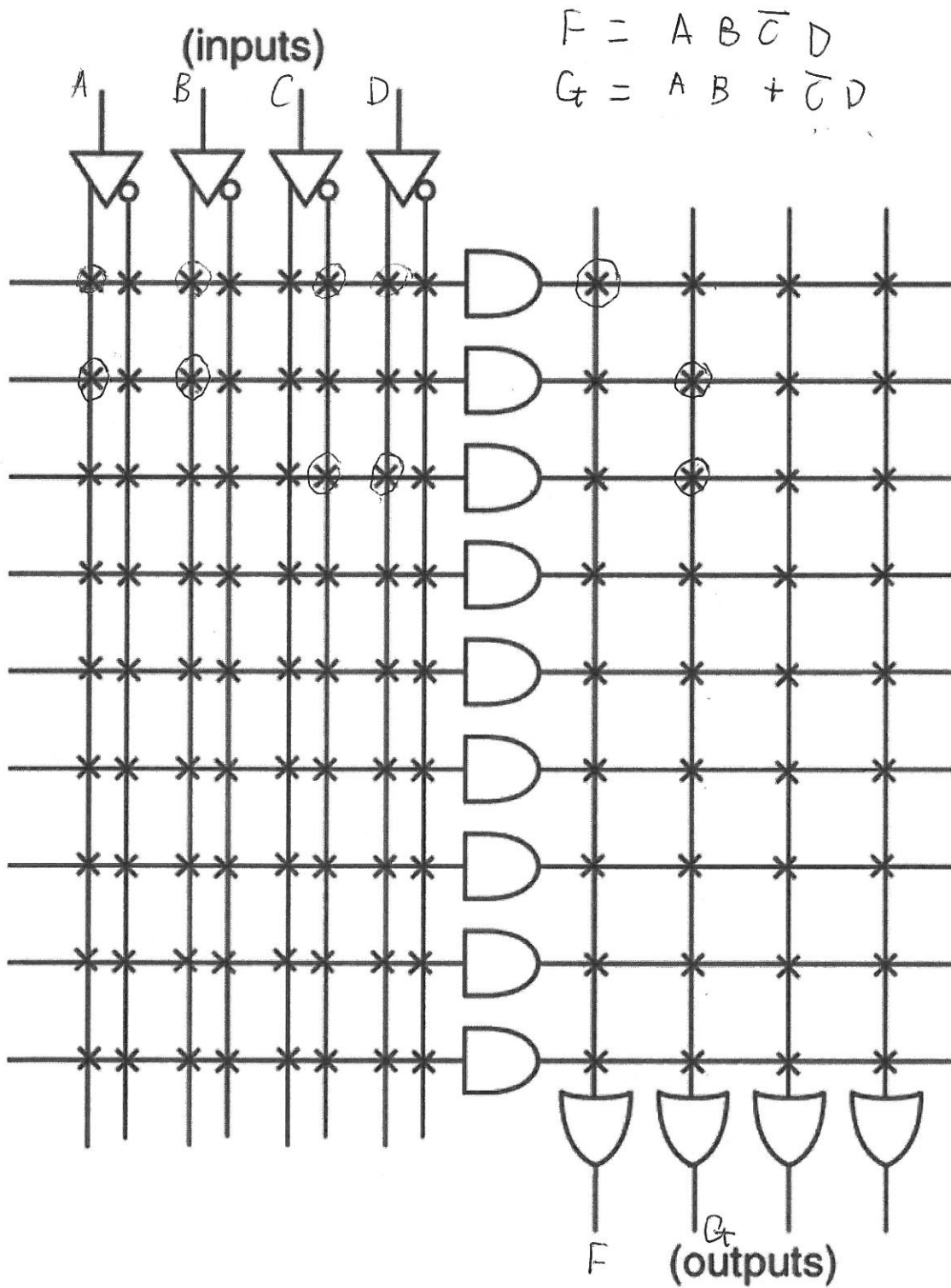


Enter FPGAs

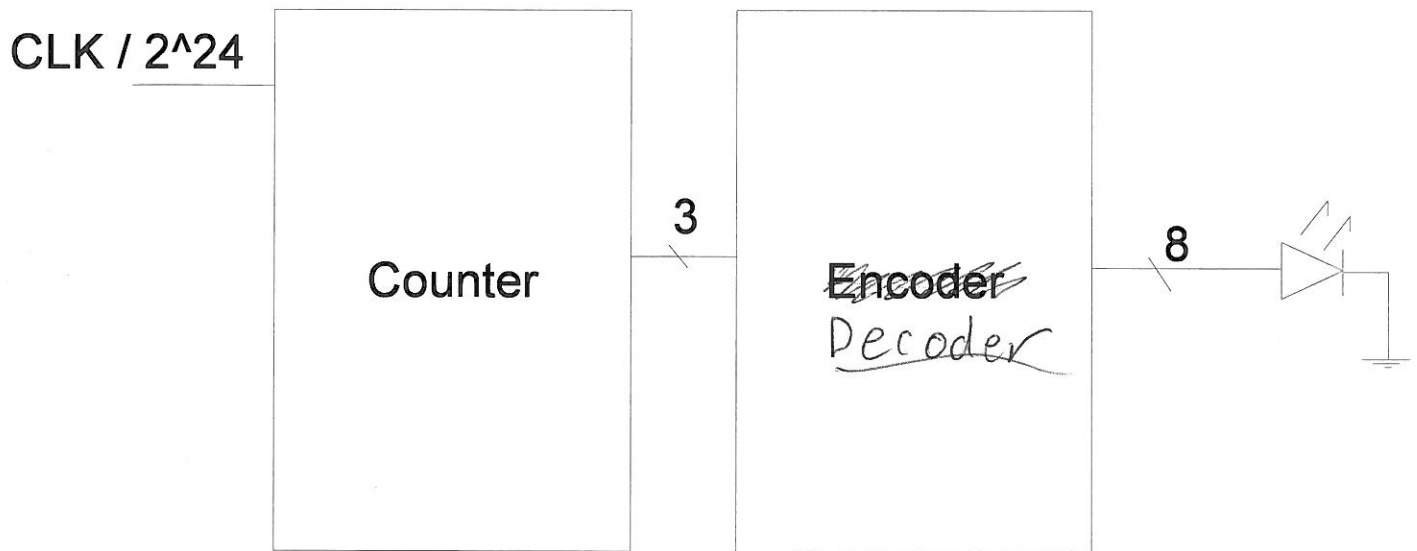
Field Programmable Gate Array



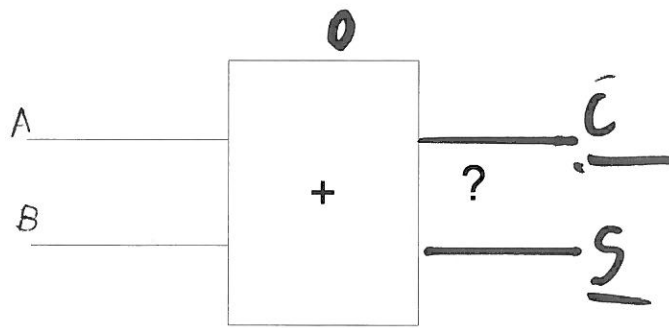
4-Bit LUT



Demo

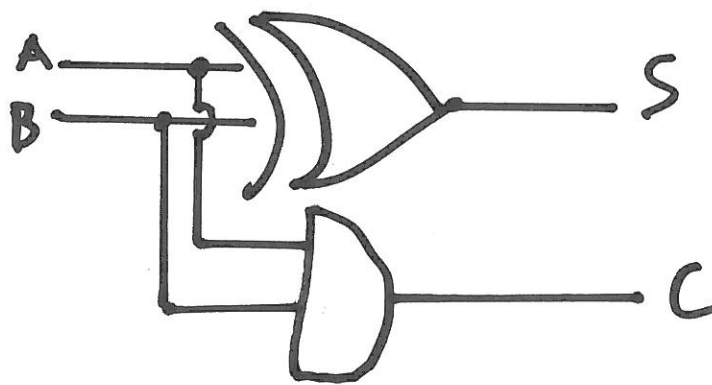


Addition



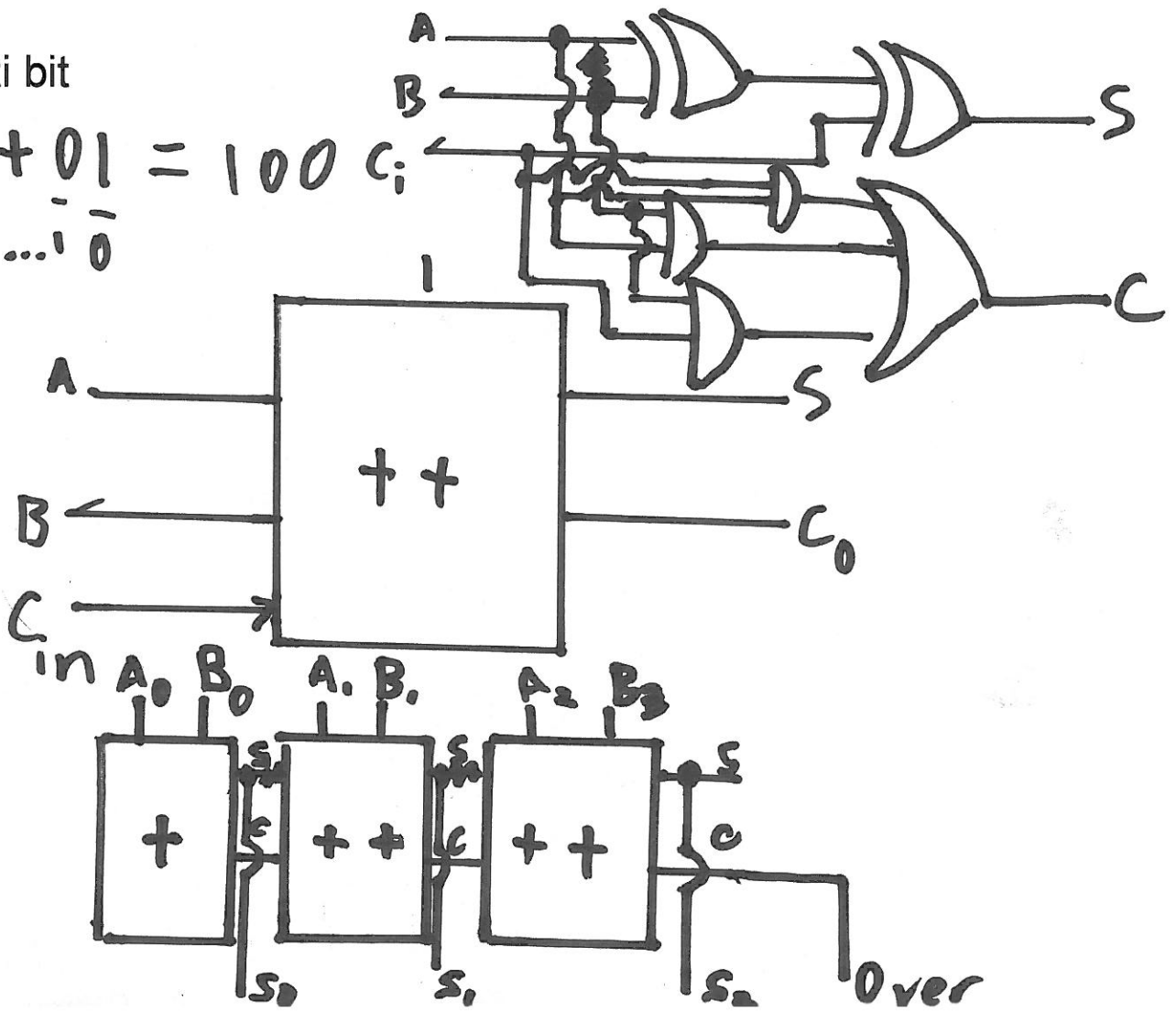
1 bit addition

$1+1=10$
 $1+0=1$
 $0+0=0$



Multi bit

$11+01=100$
 $\dots 10 \dots 10$



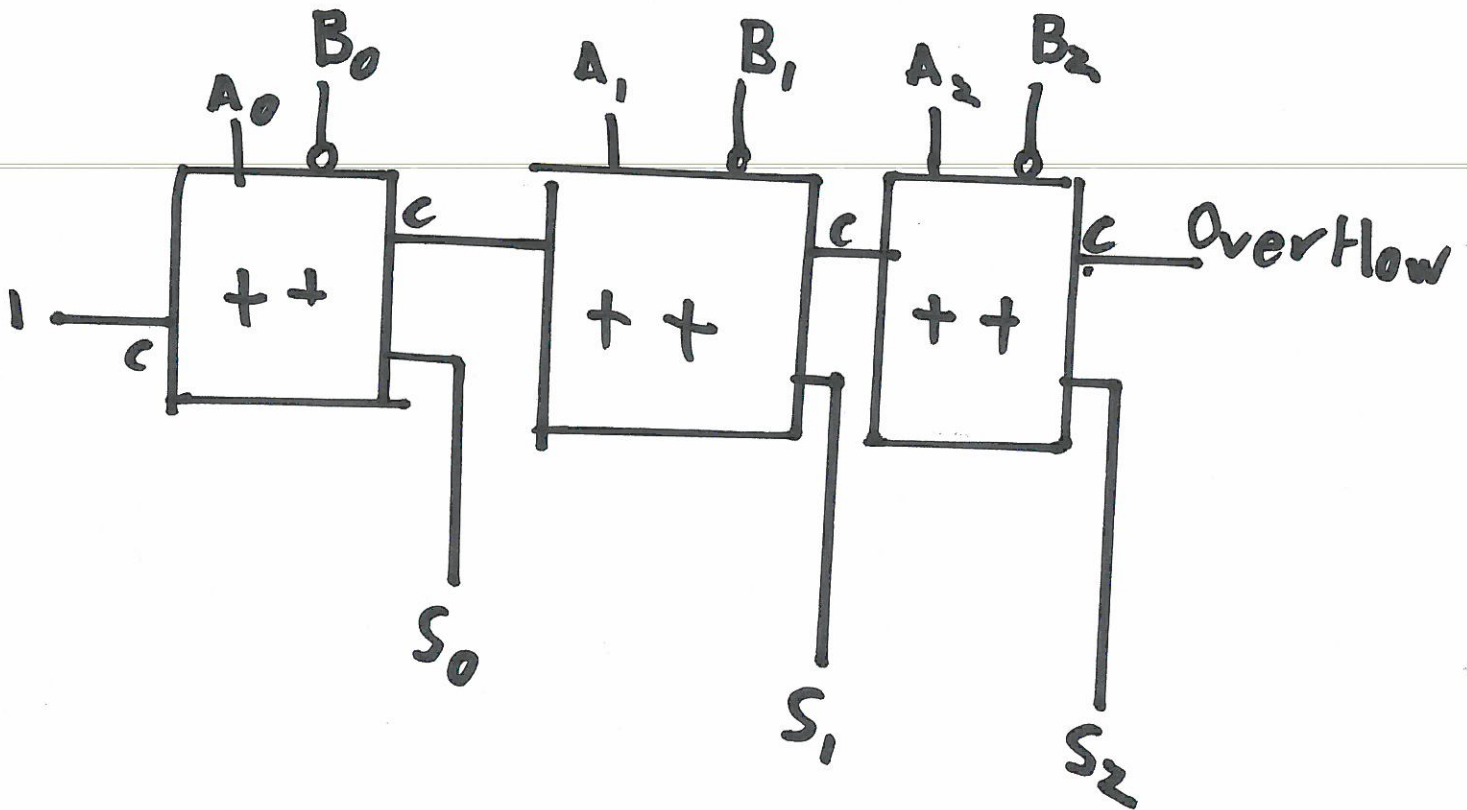
Subtraction

$$011010 = 26$$

$$100101$$

$$100110 = -26$$

$$-32 + 6 = -26$$



Mojo V3