

HW #9 due Friday

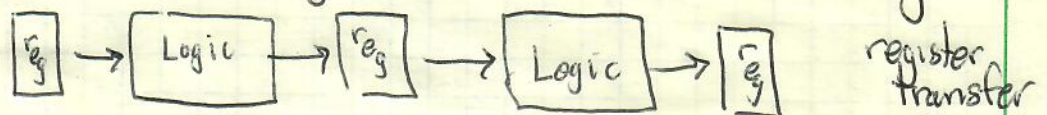
Lab Tuesday - use Zoom links  
- assignment should be posted

The construction of sophisticated circuits is performed by dividing the circuit into 2 parts

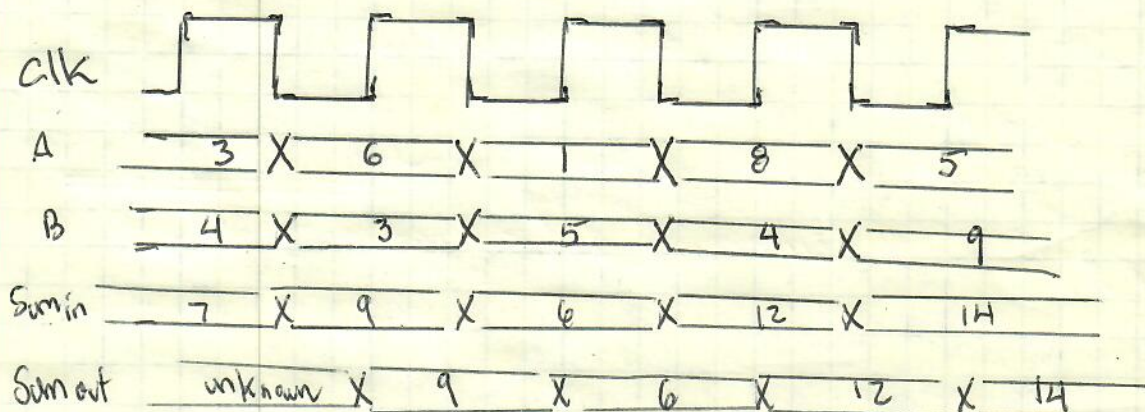
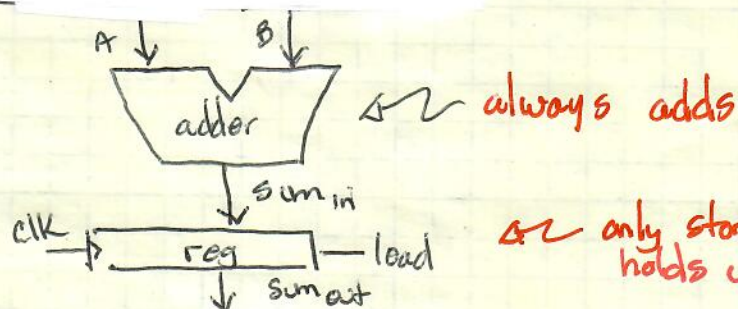
Datapath - perform operations (page 183)  
Control - sequences operations

### Focus on datapath

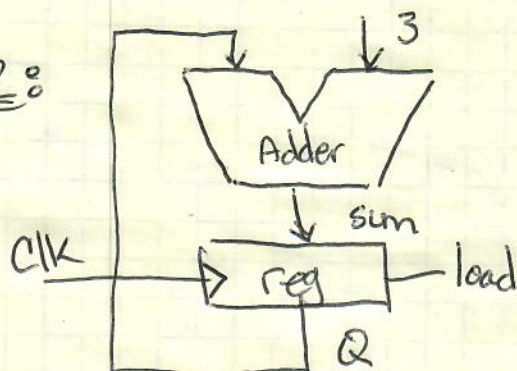
Often the datapath consists of combinational logic sandwiched between registers.



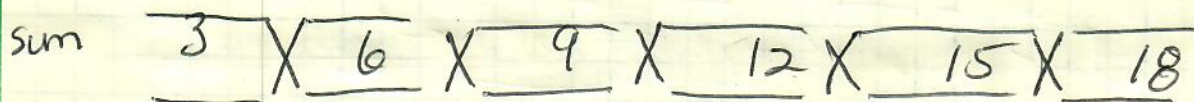
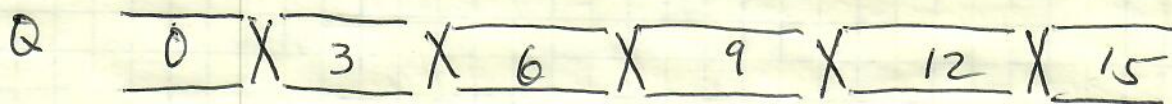
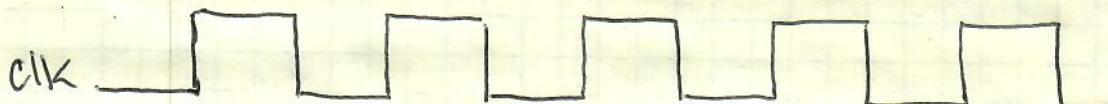
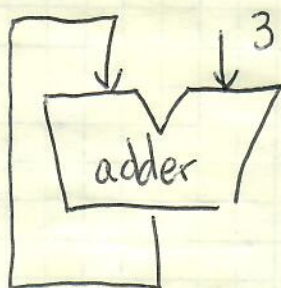
Ex 1:





Ex 2:Remember

- delay from  $\uparrow$  Q valid
- delay from adder input to output
- by then clk  $\uparrow$  long gone

Ex 3:Never doneEx 4: