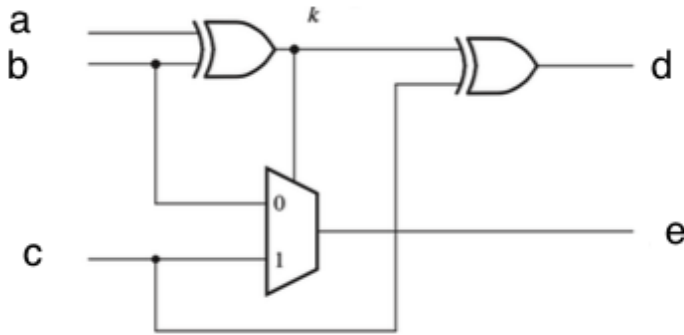


Homework 8: EE 252 Digital Electronics

1. Determine the expressions for **d** and **e** in terms of **a**, **b** and **c**.



- 2.- Determine the counting sequence for the Verilog code below, starting with the pattern 001

```
module counter (R, L, Clock, Q);  
  
    input [0:2] R;  
    input L, Clock;  
    output reg [0:2] Q;  
  
    always @(posedge Clock)  
        if (L)  
            Q <= R;  
        else  
            Q <= {Q[2], Q[0]^Q[2], Q[1]};  
  
endmodule
```

- 3.- Design a modulo-6 counter, which counts in the sequence 0, 1, 2, 3, 4, 5, 0, 1, The counter counts the clock pulses if its enable input, **w**, is equal to 1. Use D flip-flops in your circuit.