

# Ejercicio 6 y 7

$$\epsilon\text{-closure}(A) = A$$

$$\epsilon\text{-closure}(\text{mover})(A, \text{Letter}) = \epsilon(1) = \{1, 2, 3, 4, 6, 9\} = B$$

$$\epsilon\text{-closure}(\text{mover})(B, \text{Letter}) = \epsilon(5) = \{5, 8, 3, 6, 9\} = C$$

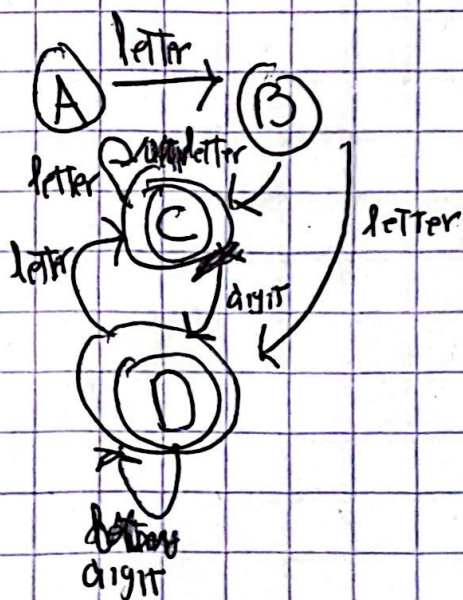
$$\epsilon\text{-closure}(B, \text{digit}) = \{7, 8, 3, 6, 9\} = D$$

$$\epsilon\text{-closure}(C, \text{Letter}) = \epsilon(5) = C$$

$$\epsilon\text{-closure}(C, \text{digit}) = \epsilon(7) = D$$

$$\epsilon\text{-closure}(D, \text{Letter}) = \epsilon(5) = C$$

$$\epsilon\text{-closure}(D, \text{digit}) = \epsilon(7) = D$$





## Ejercicio 2

$$q_1 = \epsilon + q_3 a + q_1 a$$

$$q_2 = q_1 b + q_2 b + q_3 b$$

$$q_3 = q_2 a$$

$$q_2 = q_1 b + q_2 b + q_2 a(b)$$

$$q_2 = q_1 b + q_2 (b + ab)$$

$$q_2 = q_1 b (b + ab)^*$$

$$q_1 = \epsilon + q_1 a b (b + ab)^* + q_1 a$$

$$q_1 = \epsilon + q_1 a b ((b + ab)^* + a)$$

$$q_1 = \epsilon a b ((b + ab)^* + a)^*$$

$$q_1 = a b ((b + ab)^* + a)^*$$

$$q_1 = a b ((b + ab)^* | a a)^*$$