

Exo 2 1) Déroulements

a) $x=1$

$$q_0 \underline{1} = q_0 \underline{11} \xrightarrow{2 \times (1)} 11 q_0 \xrightarrow{(3)} 1 q_1 \xrightarrow{2 \times (4)} q_1 011 \xrightarrow{(5)} q_f \underline{11}$$

" $q_f \underline{1}$

b) $(x_1, x_2) = (1, 2)$

$$q_0 \underline{(1,2)} = q_0 \underline{11 * 111} \xrightarrow{6 \times \{(1) \text{ ou } (2)\}} 11 * 111 q_0 \xrightarrow{(3)} 11 * 11 q_1$$

$$\xrightarrow{3 \times (4)} 11 q_1 * 111 \xrightarrow{(6)} 11 q_2 1111 \xrightarrow{(7)} 1 q_3 11111$$

$$\xrightarrow{2 \times (8)} q_3 01^6 \xrightarrow{(10)} q_f \underline{1^7} = q_f \underline{6}$$

c) $(x_1, x_2, x_3) = (1, 2, 3)$

$$q_f \underline{(1,2,3)} = q_0 \underline{1^2 * 1^3 * 1^4} \xrightarrow{11 \times \{(1) \text{ ou } (2)\}} 1^2 * 1^3 * 1^4 q_0$$

$$\xrightarrow{(3)} 1^2 * 1^3 * 1^3 q_1 \xrightarrow{4 \times (4)} 1^2 * 1^3 q_1 * 1^4 \xrightarrow{(6)} 1^2 * 1^3 q_2 1^5$$

$$\xrightarrow{(7)} 1^2 * 1^2 q_3 1^6 \xrightarrow{6 \times \{(8) \text{ ou } (9)\}} q_3 01^2 * 1^8$$

$$\xrightarrow{(10)} q_f \underline{1^3 * 1^8} = q_f \underline{2 * 7} = q_f \underline{(2,7)}$$