Partie 2

Q1

Cette génération est périodique car la taille du registre étant finis, le nombre de combinaison est limité.

La période de ce type de générateur pour 30 bits est de 2^30 -1 = 1073741823

Q2

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 1 | 1 | 1 |

Sortie = 1

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 1 | 1 | 1 |

Sortie = 1

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 0 | 1 | 1 |

Sortie = 1

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 0 | 0 | 1 |

Sortie = 1

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 0 | 0 | 0 |

Sortie = 0

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 1 | 0 | 0 |

Sortie = 0

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 0 | 1 | 0 |

Sortie = 0

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 0 | 0 | 1 |

Sortie = 1

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 1 | 0 | 0 |

Sortie = 0

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 1 | 1 | 0 |

Sortie = 0

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 0 | 1 | 1 |

Sortie = 1

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 1 | 0 | 1 |

Sortie = 1

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 0 | 1 | 0 |

Sortie = 0

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 1 | 0 | 1 |

Sortie = 1

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 1 | 1 | 0 |

Sortie = 0

|  |  |  |  |
| --- | --- | --- | --- |
| 1 | 1 | 1 | 1 |

On est revenue à la période est de 15 si on commence avec que des 1

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 0 | 0 | 0 |

Sortie = 0

|  |  |  |  |
| --- | --- | --- | --- |
| 0 | 0 | 0 | 0 |

On est revenu à l’état initial donc la période est de 1

Q3