Error Detection & Correction

1. Show whether the ID number 593845 is valid using the check digit. Show your working. (2)

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| --- |
| Valid (y/n): \_\_\_\_\_\_\_\_\_\_\_ |

2. Show whether the ID number 251038 is valid using the check digit. Show your working. (2)

|  |
| --- |
| Valid (y/n): \_\_\_\_\_\_\_\_\_\_\_ |

3. Calculate the check digit for the ID number 79340. Show your working. (2)

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| --- |
| Check Digit: \_\_\_\_\_\_\_\_\_\_\_ |

4. Calculate the check digit for the ID number 24182. Show your working. (2)

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| Check Digit: \_\_\_\_\_\_\_\_\_\_\_ |

5. Complete the table by showing each number with odd and even parity bits added. (4)

|  |  |  |
| --- | --- | --- |
| **Number** | **Odd Parity** | **Even Parity** |
| 0100100 |  |  |
| 1100110 |  |  |
| 1110101 |  |  |
| 0111010 |  |  |

6. Complete the table by stating whether each number passes the parity check. (4)

|  |  |  |
| --- | --- | --- |
| **Number** | **Parity** | **Pass?** |
| 01001011 | Even |  |
| 01110100 | Odd |  |
| 00010110 | Even |  |
| 00101001 | Odd |  |