**CPR101-Activity 4**

**Luca Novello**

Part A: Number Calculations (80%)

Fill the table with the missing details. Make sure to include your step-by-step calculations to get

the marks:

**97:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **256** | **128** | **64** | **32** | **16** | **8** | **4** | **2** | **1** |
| **0** | **0** | **1** | **1** | **0** | **0** | **0** | **0** | **1** |

**159:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **256** | **128** | **64** | **32** | **16** | **8** | **4** | **2** | **1** |
| **0** | **1** | **0** | **0** | **1** | **1** | **1** | **1** | **1** |

**1001001:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **256** | **128** | **64** | **32** | **16** | **8** | **4** | **2** | **1** |
| **0** | **0** | **1** | **0** | **0** | **1** | **0** | **0** | **1** |

**1001001:**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **256** | **128** | **64** | **32** | **16** | **8** | **4** | **2** | **1** |
| **0** | **0** | **1** | **0** | **1** | **0** | **1** | **1** | **1** |

| **DECIMAL** | **BINARY** |
| --- | --- |
| 97 | **1100001** |
| **73** | 1001001 |
| 159 | **10011111** |
| **87** | 1010111 |

Part B: Graphical Representation (20%)

Choose any binary number whose decimal value is between 1 and 15. Create a graphical representation for this binary number. Make sure to explain your representation idea in a few words.

**Decimal: 13**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **256** | **128** | **64** | **32** | **16** | **8** | **4** | **2** | **1** |
| **0** | **0** | **0** | **0** | **0** | **1** | **1** | **0** | **1** |

**Binary: 1101**

Graphical Representation:

Using 😵 as 0, and 😃 as 1, the graphical representation of the binary number is 😃😃😵😃.