|  |  |
| --- | --- |
| **DATA REPRESENTATION** |  |

## **Binary to Denary**

Convert the following binary numbers into their denary equivalent:

|  |  |
| --- | --- |
| Binary Number | Denary Equivalent |
| **00000110** |  |
| **00001001** |  |
| **00001101** |  |
| **00010011** |  |
| **00011000** |  |
| **00011110** |  |
| **00011111** |  |
| **00101100** |  |
| **00101111** |  |
| **00110011** |  |
| **00111110** |  |
| **01000011** |  |
| **01000111** |  |
| **01001110** |  |
| **01011101** |  |
| **01100100** |  |
| **01110101** |  |
| **01111110** |  |
| **10000010** |  |
| **10111100** |  |
| **10111111** |  |
| **11001100** |  |
| **11010001** |  |
| **11110101** |  |
| **11111111** |  |

## **Denary to Binary**

Convert the following denary numbers into their binary equivalent:

|  |  |
| --- | --- |
| Binary Number | Denary Equivalent |
|  | **4** |
|  | **9** |
|  | **13** |
|  | **19** |
|  | **22** |
|  | **27** |
|  | **38** |
|  | **66** |
|  | **87** |
|  | **99** |
|  | **105** |
|  | **111** |
|  | **117** |
|  | **134** |
|  | **155** |
|  | **201** |
|  | **222** |
|  | **245** |
|  | **253** |

## **Challenge Questions**

* How many bits are used in the above binary numbers?
* How many bits are in a byte?
* What is the smallest possible number for a byte?
* What is the largest possible number for a byte?

## 

## **Super Challenge Question**

* Explain why binary is called base 2 and denary base 10
* Describe the steps for converting a denary number into binary