**2**⁶ ⁷

**2**⁷

**2**⁵ ⁶⁷

**2**⁴ ⁵⁶⁷



**2**³

**2ºº**

**2¹**

**2²**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **128** | **64** | **32** | **16** | **8** | **4** | **2** | **1** | **Decimal** |
| **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** |
| **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **1** |
| **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **2** |
| **0** | **0** | **0** | **0** | **0** | **0** | **1** | **1** | **3** |
| **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **4** |
| **0** | **0** | **0** | **0** | **0** | **1** | **0** | **1** | **5** |
| **0** | **0** | **0** | **0** | **0** | **1** | **1** | **0** | **6** |
| **0** | **0** | **0** | **0** | **0** | **1** | **1** | **1** | **7** |
| **Example** |  |  |  |  | **4+** | **2+** | **1** | **7** |
|  |  |  |  |  |  |  |  | **8** |
|  |  |  |  |  |  |  |  | **9** |
|  |  |  |  |  |  |  |  | **10** |
|  |  |  |  |  |  |  |  | **11** |
|  |  |  |  |  |  |  |  | **12** |
|  |  |  |  |  |  |  |  | **13** |
|  |  |  |  |  |  |  |  | **14** |
|  |  |  |  |  |  |  |  | **15** |
|  |  |  |  |  |  |  |  | **16** |
|  |  |  |  |  |  |  |  | **17** |
|  |  |  |  |  |  |  |  | **18** |
|  |  |  |  |  |  |  |  | **19** |
|  |  |  |  |  |  |  |  | **20** |
|  |  |  |  |  |  |  |  | **21** |
|  |  |  |  |  |  |  |  | **22** |
|  |  |  |  |  |  |  |  | **23** |
|  |  |  |  |  |  |  |  | **45** |
|  |  |  |  |  |  |  |  | **56** |
|  |  |  |  |  |  |  |  | **75** |
|  |  |  |  |  |  |  |  | **132** |
|  |  |  |  |  |  |  |  | **164** |

**Hexadecimal Numbers**

**16²**

**16**⁷

**16**⁶

**16º**

**16¹**

**16**³

**16**⁴ ⁵⁶⁷

**16**⁵ ⁶⁷



|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  | **65,536** | **4096** | **256** | **16** | **1** | | | **Decimal** | |
|  |  |  |  |  |  |  | **0** | | | **0** | |
|  |  |  |  |  |  |  | **1** | | | **1** | |
|  |  |  |  |  |  |  | **2** | | | **2** | |
|  |  |  |  |  |  |  | **3** | | | **3** | |
|  |  |  |  |  |  |  | **4** | | | **4** | |
|  |  |  |  |  |  |  | **5** | | | **5** | |
|  |  |  |  |  |  |  | **6** | | | **6** | |
|  |  |  |  |  |  |  | **7** | | | **7** | |
|  |  |  |  |  |  |  | **8** | | | **8** | |
|  |  |  |  |  |  |  | **9** | | | **9** | |
|  |  |  |  |  |  |  | **A** | | | **10** | |
|  |  |  |  |  |  |  | **B** | | | **11** | |
|  |  |  |  |  |  |  | **C** | | | **12** | |
|  |  |  |  |  |  |  | **D** | | | **13** | |
|  |  |  |  |  |  |  | **E** | | | **14** | |
|  |  |  |  |  |  |  | **F** | | | **15** | |
|  |  |  |  |  |  | **1** | **0** | | | **16** | |
|  |  |  |  |  |  | **1** | **1** | | | **17** | |
|  |  |  |  |  |  | **1** | **2** | | | **18** | |
|  |  |  |  |  |  |  |  | | |  | |
|  |  |  |  |  |  |  |  | | |  | |
|  |  |  |  |  |  |  |  | | |  | |
|  |  |  |  |  |  |  |  | | |  | |
|  |  |  |  |  |  |  |  | | |  | |
|  |  |  |  |  |  | **2** | **D** | | | **45** | |
| **Example** |  |  |  |  |  | **(2\*16)=32** | **(1\*13)=13 or D** | | | **45** | |
|  |  |  |  |  |  |  |  | | | **56** | |
|  |  |  |  |  |  |  |  | | | **75** | |
|  |  |  |  |  |  |  |  | | | **132** | |
|  |  |  |  |  | |  |  |  |  | |

**Example**

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **4096** | **256** | **16** | **1** |
|  |  |  |  |  |  | **(16\*8)=128** | **(1X4)=4** |

10000100

**Convert 132 decimal number to Binary\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

84

**Convert to Hexidecimal\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

# Convert 1C Hexadecimal to decimal and Binary

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **4096** | **256** | **16** | **1** |
|  |  |  |  |  |  | **1** | **C** |

**In hexadecimal the symbol for 1 is 1 the symbol C is 12**

**(16\*1) + (1\*12) = (16)+(12)=28 decimal**

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

**In hexadecimal the symbol for 1 is 1 the symbol C is 12**

**Convert to binary (16\*1) +(1\*12) = 28 decimal (16) +(8)+(4) = 00011100 binary**

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **4096** | **256** | **16** | **1** |
|  |  |  |  |  |  |  |  |

1. **Convert 63 decimal number to Hex\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Convert 63 decimal to binary\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **4096** | **256** | **16** | **1** |
|  |  |  |  |  |  |  |  |

1. **Convert 01 decimal number to Hex\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Convert to 01 decimal to binary\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **4096** | **256** | **16** | **1** |
|  |  |  |  |  |  |  |  |

1. **Convert 14 hex number to decimal\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Convert 14 Hex to binary\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **4096** | **256** | **16** | **1** |
|  |  |  |  |  |  |  |  |

1. **Convert 0001 0000 binary number to decimal\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Convert 0001 000 binary to Hex\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**

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

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  |  |  |  | **4096** | **256** | **16** | **1** |
|  |  |  |  |  |  |  |  |

1. **Convert 0100 0000 binary number to decimal\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**
2. **Convert 0100 0000 binary to Hex\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_**