**Worksheet 1**

**Converting Binary to Decimal**

**Name: Class: 7th**

Use the following table to help you to convert the Decimal numbers to Binary Numbers:

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 210 | 29 | 28 | 27 | 26 | 25 | 24 | 23 | 22 | 21 | 20 |
| 1024 | 512 | 256 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |

 Write each binary number as a decimal number:

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 1- Binary = (10011) 2  =1+2+16=19 Decimal =19

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 16 | 8 | 4 | 2 | 1 |
| 1 | 0 | 0 | 1 | 1 |

✔ ✖ ✖ ✔ ✔ | 2- Binary = (10000) 2 =16 Decimal =16

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 16 | 8 | 4 | 2 | 1 |
| 1 | 0 | 0 | 0 | 0 |

 ✔ ✖ ✖ ✖ ✖ |
| 3- Binary = (101011) 2 =1+2+8+32 Decimal =43

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 32 | 16 | 8 | 4 | 2 | 1 |
| 1 | 0 | 1 | 0 | 1 | 1 |

✔ ✖ ✔ ✖ ✔ ✔ | 4- Binary = (1111) 2 =8+4+2+1 Decimal = 15

|  |  |  |  |
| --- | --- | --- | --- |
| 8 | 4 | 2 | 1 |
| 1 | 1 | 1 | 1 |

✔ ✔ ✔ ✔ |
| 5- Binary = (110011) 2 =1+2+16+32 Decimal =51

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 32 | 16 | 8 | 4 | 2 | 1 |
| 1 | 1 | 0 | 0 | 1 | 1 |

✔ ✔ ✖ ✖ ✔ ✔ | 6-Binary = (11000) 2=16+8 Decimal =24

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| 16 | 8 | 4 | 2 | 1 |
| 1 | 1 | 0 | 0 | 0 |

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