

**Worksheet #2**

**Converting Decimal to Binary**

**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 decimal number as a binary number:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **1- Decimal: (33) 10 = 20 +25**  **=1 +32**  **Binary: 33**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **25** | **24** | **23** | **22** | **21** | **20** | | **1** | **0** | **0** | **0** | **0** | **1** | | **2- Decimal: (50) 10 = 21 +24 +25**  **= 2+16+32**  **Binary: 50**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **25** | **24** | **23** | **22** | **21** | **20** | | **1** | **1** | **0** | **0** | **1** | **0** | |
| **3- Decimal: (29) 10 = 20+22+23+24**  **Binary: 16+8+4+1=29**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **24** | **23** | **22** | **21** | **20** | | **1** | **1** | **1** | **0** | **1** | | **4- Decimal: (44) 10**  **Binary:**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **25** | **24** | **23** | **22** | **21** | **20** | | **1** | **0** | **1** | **1** | **0** | **0** | |
| **5- Decimal = (19) 10=16+2+1**  **Binary: 19**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **24** | **23** | **22** | **21** | **20** | | **1** | **0** | **0** | **1** | **1** | | **6-Decimal = (22) 10=16+4+2**  **Binary:22**   |  |  |  |  |  | | --- | --- | --- | --- | --- | | **24** | **23** | **22** | **21** | **20** | | **1** | **0** | **1** | **1** | **0** | |