A table with mathematical equations

Description automatically generated

|  |  |  |  |
| --- | --- | --- | --- |
| Binary Value | Exponential Value | Fractional Value | Decimal Value |
| 0.10000000 |  |  | 0.50000000 |
| 0.01000000 |  |  | 0.25000000 |
| 0.00100000 |  |  | 0.12500000 |
| 0.00010000 |  |  | 0.06250000 |
| 0.00001000 |  |  | 0.03125000 |
| 0.00000100 |  |  | 0.01562500 |
| 0.00000010 |  |  | 0.00781250 |
| 0.00000001 |  |  | 0.00390625 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  |  |  |  | **Decimal Value** |
| 0 | 0 | 0 | 0 | 0+0+0+0=0 |
| 0 | 0 | 0 | 1 | 8+4+2+1=1 |
| 0 | 0 | 1 | 0 | 0+0+2+0=2 |
| 0 | 0 | 1 | 1 | 0+0+2+1=3 |
| 0 | 1 | 0 | 0 | 0+4+0+0=4 |
| 0 | 1 | 0 | 1 | 0+4+0+1=5 |
| 0 | 1 | 1 | 0 | 0+4+2+0=6 |
| 0 | 1 | 1 | 1 | 0+4+2+1=7 |
| 1 | 0 | 0 | 0 | 8+0+0+0=8 |
| 1 | 0 | 0 | 1 | 8+0+0+1=9 |
| 1 | 0 | 1 | 0 | 8+0+2+0=10 |
| 1 | 0 | 1 | 1 | 8+0+2+1=11 |
| 1 | 1 | 0 | 0 | 8+4+0+0=12 |
| 1 | 1 | 0 | 1 | 8+4+0+1=13 |
| 1 | 1 | 1 | 0 | 8+4+2+0=14 |
| 1 | 1 | 1 | 1 | 8+4+2+1=15 |

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| --- | --- | --- | --- | --- |
|  |  |  |  | **Decimal Value** |
| 0 | 0 | 0 | 0 | 0.0000+0.0000+0.0000+0.0000=0.0000 |
| 0 | 0 | 0 | 1 | 0.0000+0.0000+0.0000+0.0625=0.0625 |
| 0 | 0 | 1 | 0 | 0.0000+0.0000+0.1250+0.0000=0.1250 |
| 0 | 0 | 1 | 1 | 0.0000+0.0000+0.1250+0.0625=0.1875 |
| 0 | 1 | 0 | 0 | 0.0000+0.2500+0.0000+0.0000=0.2500 |
| 0 | 1 | 0 | 1 | 0.0000+0.2500+0.0000+0.0625=0.3125 |
| 0 | 1 | 1 | 0 | 0.0000+0.2500+0.1250+0.0000=0.3750 |
| 0 | 1 | 1 | 1 | 0.0000+0.2500+0.1250+0.0625=0.4375 |
| 1 | 0 | 0 | 0 | 0.5000+0.0000+0.0000+0.0000=0.5000 |
| 1 | 0 | 0 | 1 | 0.5000+0.0000+0.0000+0.0625=0.5625 |
| 1 | 0 | 1 | 0 | 0.5000+0.0000+0.1250+0.0000=0.6250 |
| 1 | 0 | 1 | 1 | 0.5000+0.0000+0.1250+0.0625=0.6875 |
| 1 | 1 | 0 | 0 | 0.5000+0.2500+0.0000+0.0000=0.7500 |
| 1 | 1 | 0 | 1 | 0.5000+0.2500+0.0000+0.0625=0.8125 |
| 1 | 1 | 1 | 0 | 0.5000+0.2500+0.1250+0.0000=0.8750 |
| 1 | 1 | 1 | 1 | 0.5000+0.2500+0.1250+0.0625=0.9375 |

|  |  |  |
| --- | --- | --- |
|  |  | Decimal Value |
| 0 | 0 |  |
| 0 | 1 |  |
| 0 | 2 |  |
| 0 | 3 |  |
| 0 | 4 |  |
| 0 | 5 | 0+5=5 |
| 0 | 6 | 0+6=6 |
| 0 | 7 | 0+7=7 |
| 1 | 0 | 1+0=8 |
| 1 | 1 | 1+1=9 |
| 1 | 2 | 8+0+2+0=10 |
| 1 | 3 | 8+0+2+1=11 |
| 1 | 4 | 8+4+0+0=12 |
| 1 | 5 | 8+4+0+1=13 |
| 1 | 6 | 8+4+2+0=14 |
| 1 | 7 | 8+4+2+1=15 |

|  |  |  |
| --- | --- | --- |
|  |  | Decimal Value |
| 0 | 0 | 0.0000+0.0000=0.0000 |
| 0 | 1 | 0.0000+0.0625=0.0625 |
| 1 | 0 | 0.1250+0.0000=0.1250 |
| 1 | 1 | 0.1250+0.0625=0.1875 |