

| Decimal | Binary | Octal | Hex |
|---------|--------|-------|-----|
| 0 | 0 | 0 | 0 |
| 1 | 1 | 1 | 1 |
| 2 | 10 | 2 | 2 |
| 3 | 11 | 3 | 3 |
| 4 | 100 | 4 | 4 |
| 5 | 101 | 5 | 5 |
| 6 | 110 | 6 | 6 |
| 7 | 111 | 7 | 7 |
| 8 | 1000 | 10 | 8 |
| 9 | 1001 | 11 | 9 |
| 10 | 1010 | 12 | A |
| 11 | 1011 | 13 | B |
| 12 | 1100 | 14 | C |
| 13 | 1101 | 15 | D |
| 14 | 1110 | 16 | E |
| 15 | 1111 | 17 | F |
| 16 | 10000 | 20 | 10 |
| 17 | 10001 | 21 | 11 |
| 18 | 10010 | 22 | 12 |
| 19 | 10011 | 23 | 13 |
| 20 | 10100 | 24 | 14 |
| 21 | 10101 | 25 | 15 |
| 22 | 10110 | 26 | 16 |
| 23 | 10111 | 27 | 17 |
| 24 | 11000 | 30 | 18 |
| 25 | 11001 | 31 | 19 |
| 26 | 11010 | 32 | 1A |
| 27 | 11011 | 33 | 1B |
| 28 | 11100 | 34 | 1C |
| 29 | 11101 | 35 | 1D |
| 30 | 11110 | 36 | 1E |
| 31 | 11111 | 37 | 1F |

| Decimal | Binary | Octal | Hex |
|---------|--------|-------|-----|
| 32 | 100000 | 40 | 20 |
| 33 | 100001 | 41 | 21 |
| 34 | 100010 | 42 | 22 |
| 35 | 100011 | 43 | 23 |
| 36 | 100100 | 44 | 24 |
| 37 | 100101 | 45 | 25 |
| 38 | 100110 | 46 | 26 |
| 39 | 100111 | 47 | 27 |
| 40 | 101000 | 50 | 28 |
| 41 | 101001 | 51 | 29 |
| 42 | 101010 | 52 | 2A |
| 43 | 101011 | 53 | 2B |
| 44 | 101100 | 54 | 2C |
| 45 | 101101 | 55 | 2D |
| 46 | 101110 | 56 | 2E |
| 47 | 101111 | 57 | F2 |
| 48 | 110000 | 60 | 30 |
| 49 | 110001 | 61 | 31 |
| 50 | 110010 | 62 | 32 |
| 51 | 110011 | 63 | 33 |
| 52 | 110100 | 64 | 34 |
| 53 | 110101 | 65 | 35 |
| 54 | 110110 | 67 | 36 |
| 55 | 110111 | 70 | 37 |
| 56 | 111000 | 71 | 38 |
| 57 | 111001 | 72 | 39 |
| 58 | 111010 | 73 | 3A |
| 59 | 111011 | 74 | 3B |
| 60 | 111100 | 75 | 3C |
| 61 | 111101 | 76 | 3D |
| 62 | 111110 | 77 | 3E |
| 63 | 111111 | 80 | 3F |

| Decimal | Binary | Octal | Hex |
|---------|---------|-------|-----|
| 64 | 1000000 | 100 | 40 |
| 65 | 1000001 | 101 | 41 |
| 66 | 1000010 | 102 | 42 |
| 67 | 1000011 | 103 | 43 |
| 68 | 1000100 | 104 | 44 |
| 69 | 1000101 | 105 | 45 |
| 70 | 1000110 | 106 | 46 |
| 71 | 1000111 | 107 | 47 |
| 72 | 1001000 | 110 | 48 |
| 73 | 1001001 | 111 | 49 |
| 74 | 1001010 | 112 | 4A |
| 75 | 1001011 | 113 | 4B |
| 76 | 1001100 | 114 | 4C |
| 77 | 1001101 | 115 | 4D |
| 78 | 1001110 | 116 | 4E |
| 79 | 1001111 | 117 | 4F |
| 80 | 1010000 | 120 | 50 |
| 81 | 1010001 | 121 | 51 |
| 82 | 1010010 | 122 | 52 |
| 83 | 1010011 | 123 | 53 |
| 84 | 1010100 | 124 | 54 |
| 85 | 1010101 | 125 | 55 |
| 86 | 1010110 | 126 | 56 |
| 87 | 1010111 | 127 | 57 |
| 88 | 1011000 | 130 | 58 |
| 89 | 1011001 | 131 | 59 |
| 90 | 1011010 | 132 | 5A |
| 91 | 1011011 | 133 | 5B |
| 92 | 1011100 | 134 | 5C |
| 93 | 1011101 | 135 | 5D |
| 94 | 1011110 | 136 | 5E |
| 95 | 1011111 | 137 | 5F |

| Decimal | Binary | Octal | Hex |
|---------|----------|-------|-----|
| 96 | 1100000 | 140 | 60 |
| 97 | 1100001 | 141 | 61 |
| 98 | 1100010 | 142 | 62 |
| 99 | 1100011 | 143 | 63 |
| 100 | 1100100 | 144 | 64 |
| 101 | 1100101 | 145 | 65 |
| 102 | 1100110 | 146 | 66 |
| 103 | 1100111 | 147 | 67 |
| 104 | 1101000 | 150 | 68 |
| 105 | 1101001 | 151 | 69 |
| 106 | 1101010 | 152 | 6A |
| 107 | 1101011 | 153 | 6B |
| 108 | 1101100 | 154 | 6C |
| 109 | 1101101 | 155 | 6D |
| 110 | 1101110 | 156 | 6E |
| 111 | 1101111 | 157 | 6F |
| 112 | 1110000 | 160 | 70 |
| 113 | 1110001 | 161 | 71 |
| 114 | 1110010 | 162 | 72 |
| 115 | 1110011 | 163 | 73 |
| 116 | 1110100 | 164 | 74 |
| 117 | 1110101 | 165 | 75 |
| 118 | 1110110 | 166 | 76 |
| 119 | 1110111 | 167 | 77 |
| 120 | 1111000 | 170 | 78 |
| 121 | 1111001 | 171 | 79 |
| 122 | 1111010 | 172 | 7A |
| 123 | 1111011 | 173 | 7B |
| 124 | 1111100 | 174 | 7C |
| 125 | 1111101 | 175 | 7D |
| 126 | 1111110 | 176 | 7E |
| 127 | 1111111 | 177 | 7F |
| 128 | 10000000 | 200 | 80 |

| | | | | | | | | | | | | | | | | | | | | | | | | |
|----------------------|-----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|-----------------|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|--|--|--|
| Decimal Σ = (> #) | 1 | 2 | 4 | 8 | 16 | 32 | 64 | 128 | 256 | 512 | 1024 | 2048 | 4096 | 6144 | 8192 | 10240 | 12288 | 14336 | 16384 | 18432 | 20480 | | | |
| | 1 | 3 | 7 | 15 | 31 | 63 | 127 | 255 | 511 | 1023 | 2047 | 4095 | 6143 | 8191 | 10239 | 12287 | 14335 | 16383 | 18431 | 20479 | 2097151 | | | |
| Binary | 2 ⁰ | 2 ¹ | 2 ² | 2 ³ | 2 ⁴ | 2 ⁵ | 2 ⁶ | 2 ⁷ | 2 ⁸ | 2 ⁹ | 2 ¹⁰ | 2 ¹¹ | 2 ¹² | 2 ¹³ | 2 ¹⁴ | 2 ¹⁵ | 2 ¹⁶ | 2 ¹⁷ | 2 ¹⁸ | 2 ¹⁹ | 2 ²⁰ | | | |
| | 1 | 10 | 100 | 1000 | 10000 | 100000 | 1000000 | 1E+07 | 1E+08 | 1E+09 | 1E+10 | 1E+11 | 1E+12 | 1E+13 | 1E+14 | 1E+15 | 1E+16 | 1E+17 | 1E+18 | 1E+19 | 1E+20 | | | |
| Octal | 8 ⁰ | | | 8 ¹ | | | 8 ² | | | 8 ³ | | | 8 ⁴ | | | 8 ⁵ | | | 8 ⁶ | | | | | |
| | X | | | XX | | | XXX | | | XXXX | | | XXXXX | | | XXXXXX | | | XXXXXXX | | | | | |
| Hex | 16 ⁰ | | | | 16 ¹ | | | | 16 ² | | | | 16 ³ | | | | 16 ⁴ | | | | 16 ⁵ | | | |
| | X | | | | XX | | | | XXX | | | | XXXX | | | | XXXXX | | | | XXXXXX | | | |

| Example $2361_{10} = 101001000111_2 = 5107_8 = A47_{16}$ | | | | |
|--|----------|--|--|--|
| Decimal | Binary | | | |
| 2631 | | | | |
| -2048 | 2^{11} | | | |
| 583 | | | | |
| -512 | 2^9 | | | |
| 71 | | | | |
| -64 | 2^6 | | | |
| 7 | | | | |
| -4 | 2^2 | | | |
| 3 | | | | |
| -2 | 2^1 | | | |
| 1 | | | | |
| -1 | 2^0 | | | |
| 0 | | | | |

| Decimal | 2631_{10} | | | |
|---------|-------------|-----|-----|-----|
| Binary | 101 | 001 | 000 | 111 |
| Octal | 5107_8 | | | |

| Decimal | 2631_{10} | | |
|---------|-------------|------|------|
| Binary | 1010 | 0100 | 0111 |
| Hex | $A47_{16}$ | | |

| Example $3621_{10} = 111000100101_2 = 7045_8$ | | | | | | | | | | | | |
|---|-----------|-----------|---------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Decimal | 2048 | 1024 | 512 | 256 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| Binary | 2^{11} | 2^{10} | 2^9 | 2^8 | 2^7 | 2^6 | 2^5 | 2^4 | 2^3 | 2^2 | 2^1 | 2^0 |
| | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| | 3621-2048 | 1573-1024 | 549-512 | 37 | 37 | 37 | 37-32 | 5 | 5 | 5-4 | 1 | 1-1 |
| | = 1575 | = 549 | = 37 | X | X | X | = 5 | X | X | = 1 | X | = 0 |
| Octal | 7 | | | 0 | | | 4 | | | 5 | | |

| Example $3621_{10} = 111000100101_2 = E25_{16}$ | | | | | | | | | | | | |
|---|------|------|-----|-----|-----|----|----|----|---|---|---|---|
| Decimal | 2048 | 1024 | 512 | 256 | 128 | 64 | 32 | 16 | 8 | 4 | 2 | 1 |
| Binary | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 1 |
| Hex | E | | | | 2 | | | | 5 | | | |
| 3621-2048 = 1573-1024 = 549-512 = 37-32 = 5-4 = 1-1 = 0 | | | | | | | | | | | | |