Octal – Base 8

This number system is based on the first 8 digits, 0 through 7.

|  |  |  |
| --- | --- | --- |
| Denary digits | Binary Digits | Octal |
| 0, 1, 2, 3, 4, 5, 6, 7, 8, 9 | 0, 1 | 0, 1, 2, 3, 4, 5, 6, 7 |

In both systems you can count things:

|  |  |  |  |
| --- | --- | --- | --- |
| Objects | Denary | Binary | Octal |
|  | 0 | 0 | 0 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 1 | 1 | 1 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 2 | 10 | 2 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 3 | 11 | 3 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 4 | 100 | 4 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 5 | 101 | 5 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 6 | 110 | 6 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 7 | 111 | 7 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 8 | 1000 | 10 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 9 | 1001 | 11 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 10 | 1010 | 12 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 11 | 1011 | 13 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 12 | 1100 | 14 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 13 | 1101 | 15 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 14 | 1110 | 16 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 15 | 1111 | 17 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 16 | 10000 | 20 |
| http://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpghttp://anonymousradioshow.files.wordpress.com/2009/05/ladybird.jpg | 17 | 10001 | 21 |
| etc | etc | etc | etc |

## 

## Octal

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Number | 512’s  **83** | 64’s  **82** | 8’s  **81** | 1’s  **80** | Denary equivalent |
| 40738 | 4 | 0 | 7 | 3 | (4x512)+(0x64)+(7x8)+(3x1) = 2048 + 0 + 56 + 3  =2107 |
|  | 1 | 2 |  |  | (1x512)+(2x64)+(0x8)+(0x1) = 512 + 128 + 0 +0  =640 |
| 73108 |  |  |  |  |  |
|  |  |  |  |  | =3451 |