

# Binary to decimal conversion

Secret Word 1 - ['1000011', '1100010', '1101001', '1100110', '1110101']

1	0	0	0	0	1	1
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
1 X 64 =64	0 X 32=0	16 X 0 =0	8 X 0=0	4 X 0=0	2 X 1=2	1 X 1=1

$$64 + 0 + 0 + 0 + 0 + 2 + 1 = 67$$

$$1000011 = 67$$

1	1	0	0	0	1	0
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
1 X 64 =64	32 X 1= 32	16 X 0 =0	8 X 0=0	4 X 0=0	2 X 1= 2	1 X 0= 0

$$64 + 32 + 0 + 0 + 0 + 2 + 0 = 98$$

$$1100010 = 98$$

1	1	0	1	0	0	1
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
1 X 64 =64	32 X 1= 32	16 X 0= 0	8 X 1= 8	4 X 0= 0	2 X 0= 0	1 X 1= 1

$$64 + 32 + 0 + 8 + 0 + 0 + 1 = 105$$

$$1101001 = 105$$

1	1	0	0	1	1	0
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
1 X 64 =64	32 X 1= 32	16 X 0= 0	8 X 0=0	4 X 1= 4	2 X 1= 2	1 X 0= 0

$$64 + 32 + 0 + 0 + 4 + 2 + 0 = 102$$

$$1100110 = 102$$

1	1	1	0	1	0	1
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
1 X 64 =64	32 X 1= 32	16 X 1= 16	8 X 0=0	4 X 1= 4	2 X 0= 0	1 X 1= 1

$$64 + 32 + 16 + 0 + 4 + 0 + 1 = 101$$

$$1110101 = 101$$

**Secret Word 2 - ['1000011', '1100010', '1101001', '1100110', '1100000', '1100110', '1110000']**

1	0	0	0	0	1	1
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
1 X 64 =64	32 x 0= 0	16 x 0= 0	8 x 0 = 0	4 x 0 = 0	2 x 1 = 2	1 x 1 = 1

$$64 + 0 + 0 + 0 + 0 + 2 + 1 = 67$$

$$1000011 = 67$$

1	1	0	0	0	1	0
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
1 X 64 =64	32 X 1= 32	16 X 0 =0	8 X 0=0	4 X 0=0	2 X 1= 2	1 X 0= 0

$$64 + 32 + 0 + 0 + 0 + 2 + 0 = 98$$

$$1100010 = 98$$

1	1	0	1	0	0	1
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
1 X 64 =64	32 X 1= 32	16 X 0= 0	8 X 1= 8	4 X 0= 0	2 X 0= 0	1 X 1= 1

$$64 + 32 + 0 + 8 + 0 + 0 + 1 = 105$$

$$1101001 = 105$$

1	1	0	0	1	1	0
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
1 X 64 =64	32 X 1= 32	16 X 0= 0	8 X 0=0	4 X 1= 4	2 X 1= 2	1 X 0= 0

$$64 + 32 + 0 + 0 + 4 + 2 + 0 = 102$$

$$1100110 = 102$$

1	1	0	0	0	0	0
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
$1 \times 64$ =64	$32 \times 1 =$ 32	$16 \times 0 =$ 0	$8 \times 0 =$ 0	$4 \times 0 =$ 0	$2 \times 0 =$ 0	$1 \times 0 =$ 0

$$64 + 32 + 0 + 0 + 0 + 0 + 0 = 96$$

$$1100000 = 96$$

1	1	0	0	1	1	0
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
$1 \times 64$ =64	$32 \times 1 =$ 32	$16 \times 0 =$ 0	$8 \times 0 = 0$	$4 \times 1 =$ 4	$2 \times 1 =$ 2	$1 \times 0 =$ 0

$$64 + 32 + 0 + 0 + 4 + 2 + 0 = 102$$

$$1100110 = 102$$

1	1	1	0	0	0	0
$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
64	32	16	8	4	2	1
$1 \times 64$ =64	$32 \times 1 =$ 32	$16 \times 1 =$ 16	$8 \times 0 =$ 0	$4 \times 0 =$ 0	$2 \times 0 =$ 0	$1 \times 0 =$ 0

$$64 + 32 + 16 + 0 + 0 + 0 + 0 = 112$$

$$1110000 = 112$$