

## Converting decimal to binary and vice versa

Convert the following decimal numbers to binary numbers:

Base	$2^6$	$2^5$	$2^4$	$2^3$	$2^2$	$2^1$	$2^0$
Value	64	32	16	8	4	2	1
13 =							
25 =							
89 =							
183 =							

Convert the following binary numbers to decimal numbers:

0	0	1	1	0	1	1	=
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1	1	0	1	1	0	0	=
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1	1	0	1	1	1	0	=
---	---	---	---	---	---	---	---

1	1	0	1	0	1	1	=
---	---	---	---	---	---	---	---

1	1	1	1	1	0	1	=
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The formula for finding the highest number that can be stored in given bits is  $2^N - 1$ .

What is the largest number that can be stored in 6 bits?