Converting Binary Numbers to Decimal Numbers

Repeated process:

1. Remember each digit represents a power of 2.

0	0	0	0	0	0	0	0
2^7	2^6	2^5	2^4	2^3	2^2	2^1	2^0
128	64	32	16	8	4	2	1

2. If the binary digit is zero – the number is not used.
3. If the binary digit is one – the number is used.
4. Add the used numbers.

Example: Change 10001011 to decimal

1	0	0	0	1	0	1	1		
128	64	32	16	8	4	2	1		
128	---	---	---	8	---	2	1	=	139

Example: Change 11100101 to decimal

1	1	1	0	0	1	0	1		
128	64	32	---	---	4	---	1		
								=	229

Try these and verify that you can get the right answer …

00101100 → 44

10111101 → 189

00100110 11100010 → 9954

*** This means there is another way to convert decimal to binary!

Example: 203 =

1	1	0	0	1	0	1	1	
128	64	---	---	8	---	2	1	= 203