Binary Numbers worksheet 2

To convert numbers written in binary system (base-two) to numbers written in the base-ten system we need to look at the place value of each digit.

Base 2

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

Base 10

64 + 16 + 8 + 1= 89

Convert each base-2 number below to a number written in base-10

1. Base-2 : 101 — 32s 16s 8s **1** 4s **0** 2s **1** 1s — Base-10 **5**

2. Base-2:1001 — 32s 16s 8s 4s 2s 1s — Base-10 _____

3. Base-2 :111 — 32s 16s 8s 4s 2s 1s — Base-10 _____

4. Base-2:1010 — 32s 16s 8s 4s 2s 1s — Base-10 _____

5. Base-2:10010 — 32s 16s 8s 4s 2s 1s — Base-10 _____

6. Base-2:10011 — 32s 16s 8s 4s 2s 1s — Base-10 _____

7. Base-2:101001 — 32s 16s 8s 4s 2s 1s — Base-10 _____

8. Base-2:100110 — 32s 16s 8s 4s 2s 1s — Base-10 _____