

Binary Place Values

Fill in the table:

2 ⁹	2 ⁸	2 ⁷	2 ⁶	2 ⁵	2 ⁴	2 ³	2 ²	2 ¹	2 ⁰	2 ⁻¹	2 ⁻²	2 ⁻³	2 ⁻⁴

Evaluate:

1) 2⁷ =

2) 2⁴ =

3) 2⁸ =

4) 2¹² =

5) 2¹⁶ =

Write as a power of 2:

6) 8 =

7) 32 =

8) 8192 =

9) 1024 =

10) 1 =

Hexadecimal Place Values

Fill in the table:

16 ⁴	16 ³	16 ²	16 ¹	16 ⁰	16 ⁻¹	16 ⁻²	16 ⁻³

Evaluate:

11) 16⁰ =

12) 16¹ =

13) 16² =

14) 16³ =

15) 16⁴ =

Write as a power of 16:

16) 4096 =

17) 256 =

18) 1 =

19) 65536 =

20) 16 =

Hexadecimal Digits:	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
											10	11	12	13	14	15

Convert the following binary numbers to decimal numbers and hexadecimal numbers: (Document your technique.)

21) 110_2

22) $1011.0111\ 10_2$

Convert the following decimal numbers to binary numbers and hexadecimal numbers: (Document your technique.)

23) 177

24) 17.66

Convert the following hexadecimal numbers to decimal numbers and to binary numbers: (Document your technique.)

25) $A.1_{16}$

26) $2B8.D3_{16}$

Convert the following decimal numbers to hexadecimal numbers and to binary numbers: (Document your technique.)

27) 3682

28) 25.6875