

Name _____

Binary and hex questions

Binary to Decimal

Q1 10110 as a decimal (example)

16	8	4	2	1	Decimal
1	0	1	1	0	$16 + 4 + 2 = 22$

1 times 16

1 times 4

1 times 2

Add them up

Q2 11000 as a decimal

16	8	4	2	1	Decimal

Q3 11011 as a decimal

16	8	4	2	1	Decimal

Q4 10010 as a decimal

16	8	4	2	1	Decimal

Q5 10001 as a decimal

16	8	4	2	1	Decimal

Q6 011100 as a decimal

32	16	8	4	2	1	Decimal

Q7 111100 as a decimal

32	16	8	4	2	1	Decimal

Q8 011010 as a decimal

32	16	8	4	2	1	Decimal

Q9 110101 as a decimal

32	16	8	4	2	1	Decimal

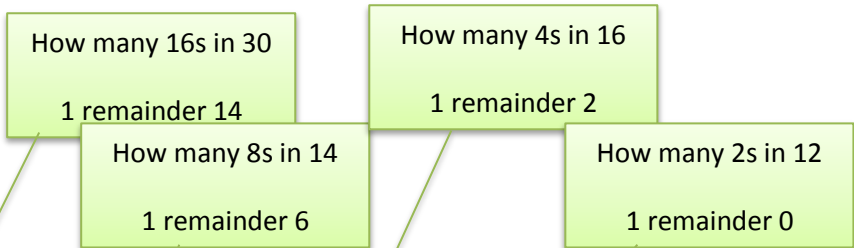
Q10 101010 as a decimal

32	16	8	4	2	1	Decimal

Decimal to binary

Q11 30 as a binary number

Decimal	16	8	4	2	1
30	1	1	1	1	0



Q12 4 as a binary number

Decimal	16	8	4	2	1
4					

Q13 9 as a binary number

Decimal	16	8	4	2	1
9					

Q14 29 as a binary number

Decimal	16	8	4	2	1
29					

Q15 31 as a binary number

Decimal	16	8	4	2	1
31					

Q16 7 as a binary number

Decimal	16	8	4	2	1
7					

Q17 63 as a binary number

Decimal	32	16	8	4	2	1
63						

Q18 45 as a binary number

Decimal	32	16	8	4	2	1
30						

Q19 45 as a binary number

Decimal	32	16	8	4	2	1
30						

Q20 45 as a binary number

Decimal	32	16	8	4	2	1
30						

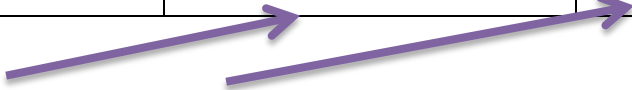
Hexadecimal and decimal

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

Decimal to Hex

Q21 30 as a Hex number

Decimal	16	1
30		



How many 16s in 30? What is left over?

Q22 64 as a Hex number

Decimal	16	1
64		

Q23 91 as a Hex number

Decimal	16	1
91		

Q24 255 as a Hex number

Decimal	16	1
255		

Q25 16 as a Hex number

Decimal	16	1
16		

Q26 100 as a Hex number

Decimal	16	1
100		

Q27 160 as a Hex number

Decimal	16	1
160		

Q28 175 as a Hex number

Decimal	16	1
175		

Q29 1 as a Hex number

Decimal	16	1
1		

Q30 144 as a Hex number

Decimal	16	1
144		

Hexadecimal and decimal

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

Hex to Decimal

Q31 A1 as a decimal number

From the table, A is 10

So, 10 16s + 1 is?

16	1	Decimal
A	1	

Q32 04 as a decimal number

16	1	Decimal
0	4	

Q33 5A as a decimal number

16	1	Decimal
5	A	

Q34 36 as a decimal number

16	1	Decimal
3	6	

Q35 59 as a decimal number

16	1	Decimal

Q36 FF as a decimal number

16	1	Decimal

Q37 F1 as a decimal number

16	1	Decimal

Q38 99 as a decimal number

16	1	Decimal

Q39 A0 as a decimal number

16	1	Decimal

Q40 1BB as a decimal number

256	16	1	Decimal

Binary and Hexadecimal

0	0	0	0	0
1	0	0	0	1
2	0	0	1	0
3	0	0	1	1
4	0	1	0	0
5	0	1	0	1
6	0	1	1	0
7	0	1	1	1
8	1	0	0	0
9	1	0	0	1
A	1	0	1	0
B	1	0	1	1
C	1	1	0	0
D	1	1	0	1
E	1	1	1	0
F	1	1	1	1

Each hex character becomes a “nybble” of 4 binary characters.

So E5A1 becomes 1110 0101 1010 0001

Fill the gap, binary 101 is what in denary?

Fill the gap, binary 101 is what in hex?

Complete this table.

	Binary	Decimal	Hexadecimal
Q56	101		
Q57	1100 1010		
Q58	1010001		
Q59		51	
Q60			A3
Q61		67	
Q62			A6C
Q63		99	
Q64	1110001		
Q65		160	
Q66	10010		
Q67		16	
Q68			FF
Q69			25
Q70			90