

Binary Subtraction Must show working out on all answers

Example: $20 - 10 = 10$

Step 1: convert both numbers to binary

	128	64	32	16	8	4	2	1
20	0	0	0	1	0	1	0	0
10	0	0	0	0	1	0	1	0

Step 2: convert 2nd number to Two's compliment (in this case make -10)

	128	64	32	16	8	4	2	1
10	0	0	0	0	1	0	1	0
-10	1	1	1	1	0	1	1	0

Step 3: Add the numbers using binary addition rules – IGNORING ANY OVERFLOW NUMBERS

	128	64	32	16	8	4	2	1
20	0	0	0	1	0	1	0	0
-10	1	1	1	1	0	1	1	0
	1	1	1		1			
10	0	0	0	0	1	0	1	0

Answer : 00001010 = 10

1. $15 - 7 =$

Step 1: Convert both to binary:

	128	64	32	16	8	4	2	1
15								
7								

Step 2: convert 2nd number to Two's compliment

	128	64	32	16	8	4	2	1
7								
-7								

Step 3: Add the numbers using binary addition rules – **IGNORING ANY OVERFLOW NUMBERS**

	128	64	32	16	8	4	2	1
15								
-7								

Answer

2. $20 - 5$

3. $50 - 35$

4. $100 - 75$

5. $180 - 20$

6. $250 - 160$

Space to work out