Booth Multiplication Algorithm

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Roll No: 08

1. 10 x -8

M = 01010
-M = 10110
Q = 11000

A	Q	Q_{n-1}	Operation	Step
00000	11000	0		Initialization
00000	01100	0	shift	1
00000	00110	0	shift	2
00000	00011	0	shift	3
10110	00011	0	A = A-M	4
11011	00001	1	shift	
11101	10000	1	shift	5

Ans: 1110110000
-80

Q. -12×-11

M: 10100

-M: 01100

Q: 10101

A	Q	Q_{n-1}	Operation	Steps
				Initialization
00000	1010 | 1	0		
01100	10101	0	A = A − M	
00110	0101 | 0	1	shift	1
11010	01010	1	A = A + M	
11101	0010 | 1	0	shift	2
01001	00101	0	A = A − M	
00100	1001 | 0	1	shift	3
11000	10010	1	A = A + M	
11100	0100 | 1	0	shift	4
01000	01001	0	A = A − M	
00100	00100	1	shift	5

Ans: 0010000100

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