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Binary Division :

Given a = 7, b = -3, calculate a/b and b/a using binary number operation !

A = 7 = 0111

B = -3 = 1101

1. A/B =

Step	A	Q	M	Operation
0	0000	0111	1101	Initiate value
1	0000	1110	1101	Shift Left
	0011	1110	1101	A-M
	0011	1111	1101	Q(0) = 1
2	0111	1110	1101	Shift Left
	1010	1110	1101	A-M
	0111	1110	1101	Q(0)=0, A+M
3	1111	1100	1101	Shift Left
	0010	1110	1101	A-M
	0010	1111	1101	Q(0)=1
4	0101	1110	1101	Shift Left
	1000	1110	1101	A-M
	0101	1110	1101	Q(0)=0, A+M

Value in A = Remainder
Value in Q = Quotient

So the answer is : 1110 with the remainder 0101

2. **B/A =**

Step	A	Q	M	Operation
0	0000	1101	0111	Initiate value
1	0001	1010	0111	Shift Left
	1010	1010	0111	A-M
	1010	1011	0111	Q(0) = 1
2	0101	0110	0111	Shift Left
	1110	0110	0111	A-M
	0101	0110	0111	Q(0)=0, A+M
3	1010	1100	0111	Shift Left
	1011	1100	0111	A-M
	1010	1100	0111	Q(0)=0, A+M
4	0101	1000	0111	Shift Left
	1110	1000	0111	A-M
	0101	1000	0111	Q(0)=0, A+M

Value in A = Remainder
Value in Q = Quotient

So the answer is : 1000 with the remainder 0101