$M = 7,\ Q = -3 \rightarrow 1011 \rightarrow 1101$

$M = 0111$

$\downarrow$ $\quad -M$

$1000 \rightarrow \boxed{1001}$

A	Q	Q_{-1}	Act^
0000	1101	0	Init^ n=4
+ 1001			
1001	1101	0 x	A → A−M
↓			
1100	1110	1	ARS / n−1
0111			
0011	1110	1	A+M
↓			
0001	1111	0	ARS, n=2
1001			
1010	1111	0	A−M
↓			
1101	0111	1	ARS, n=1
↓			
1110	1011	1	ARS, n=0

$(11101011)_2 \rightarrow +\ 00010100\ 1$

$(-21)_{10} \leftarrow 00010101$

-7×-3

$M = (-7) = 1111 = 1000 \rightarrow \underline{1001}$ (M)

$-M \rightarrow 0110 \rightarrow \underline{0111}$

$Q = -3 = 1011 = \underline{1101}$

9) -11×13

$M = -11 = 11011 = \underline{10101}$

$-M = \underline{01011}$

$Q = \underline{01101}$

A	Q
11011	10001
00100	01111

$\underline{(-143)_{10}} \leftarrow$

Restoring Divs^

1) 11 ÷ 3

Q = 1011 , M = 00011 = 11101 (−M)

A	Q	Act^	n
00000	1011	Init^	4
00001	011_	SL	
11110	011_	A−M	3
00001	0110	Q_0=0, Restore A	
00010	110_	SL	
11111	110_	A−M	2
00010	1100	Q_0=0, A+M	
00101	100_	SL	
00010	100_	A−M	n=1
00010	1001	Q_0=1	

00101	001_	SL	} 0
00010	001_	A-M	
↓			
00010	0011	$Q_0 = 1$	

Rem = 2 $\quad$ Q = 3

2) 13 ÷ 5

$Q = 1101, \quad M = 00101$

$-M = 11011$

A	Q	Act^n	n
00000	1101	Init^n	4

Non-Restoring

1) $11 \div 3$

$Q = 1011, \quad M = 00011$

$-M = 11101$

A	Q	Act^	n
00000	1011	Init^	4
00001	011_	LS	
11110	0110	A-M	3
		$Q_0 = 0$, n--	
11100	110_	LS	
11111	1100	A+M	2
		$Q_0 = 0$, n--	
11111	100_	LS	
00010	1001	A+M	1
		$Q_0 = 1$, n--	

00101	001_	LS	} 0
00010	0011	A-M	
		$q_0 = 1$, n--	

A q

↳ ∴ A is (+)ve when n = 0,
No need for A ← A+M

Rem → ∴ A = 00010 = $(2)_{10}$

Quot → q = 0011 = $(3)_{10}$

2) 7 ÷ 3

q = 111 M = 0011

-M = 1101