

Integer Division

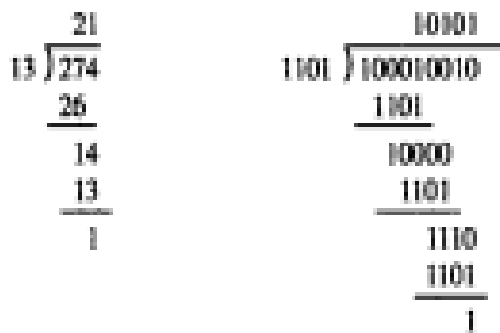


Figure 6.20 Longhand division examples.

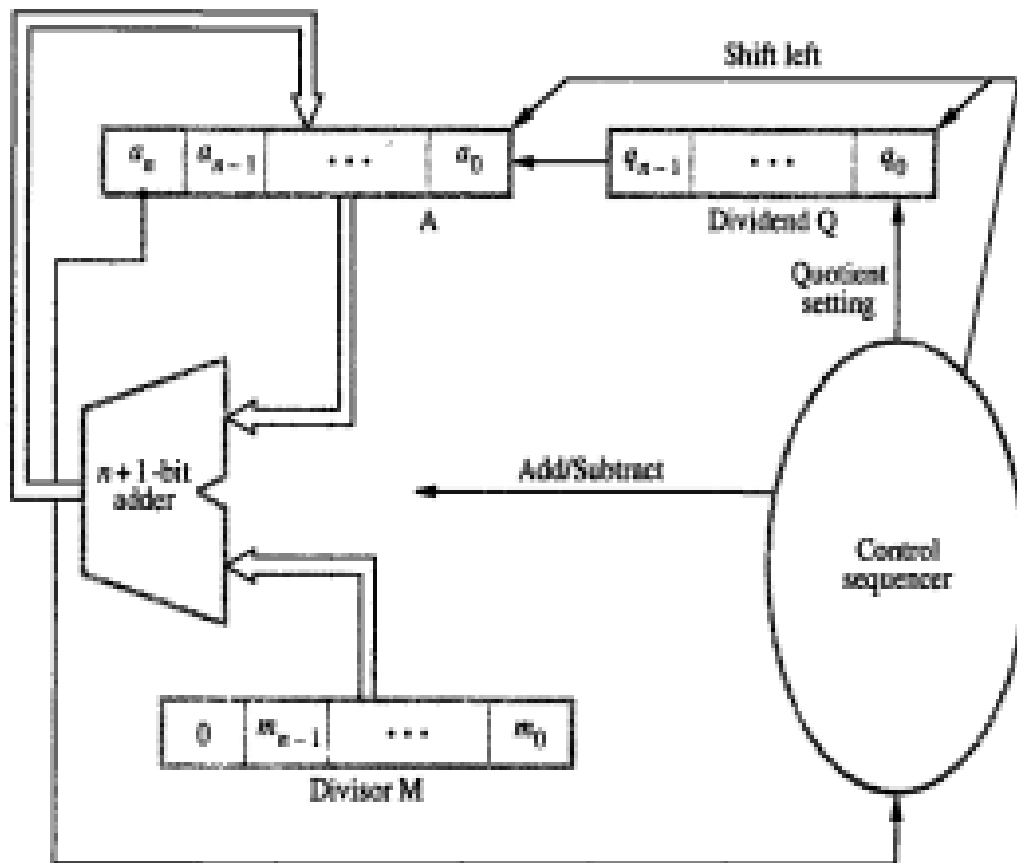


Figure 6.21 Circuit arrangement for binary division.

Restoring Division

The following algorithm performs restoring division.

Do the following n times:

1. Shift A and Q left one binary position.
2. Subtract M from A, and place the answer back in A.
3. If the sign of A is 1, set q_0 to 0 and add M back to A (that is, restore A); otherwise, set q_0 to 1.

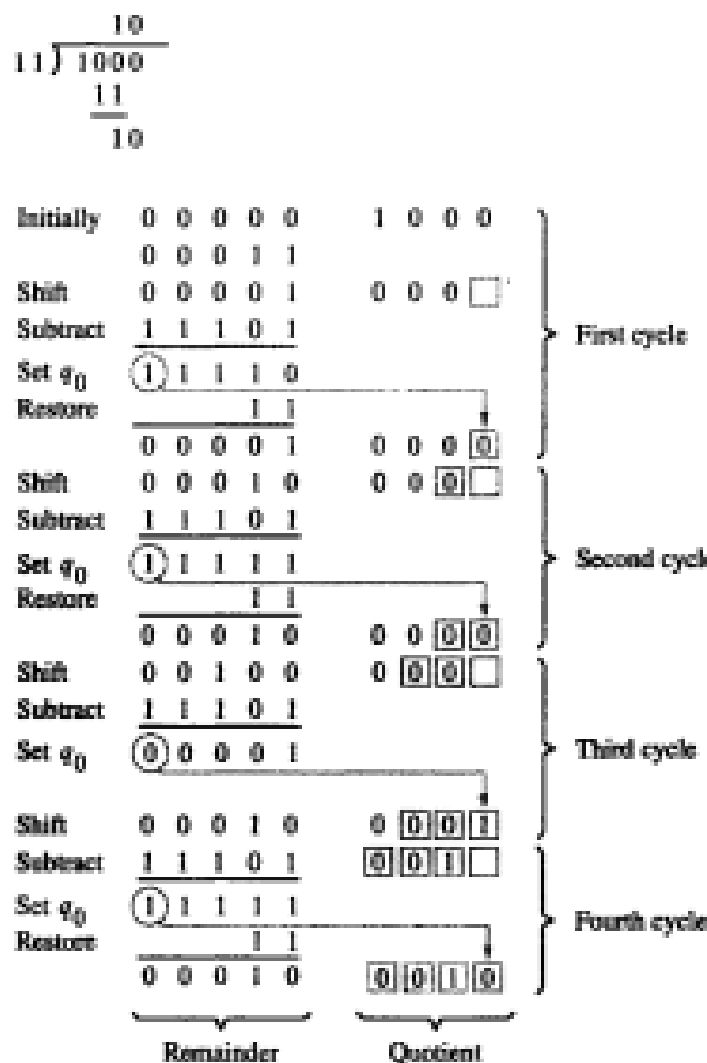


Figure 6.22 A restoring-division example.