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| At an event in VIT, a team is asked to design a processor that performs multiplication using Booth’s Algorithm.   1. Show the step-by-step process for multiplying (22)10 and (-7)10. 2. Validate the correctness of the result. 3. Find the decimal equivalent of the content of the accumulator at the end of the second iteration. |
| Perform the following Floating-point operation on the numbers (251.725)10 and (142.25)10.   1. Convert the above decimal numbers to binary format. 2. Perform subtraction for the given numbers and write the normalized result in IEEE single precision format. |

Everyday a milk vendor equally distributes “L” litres of total milk among “N” number of customers where L=255 and N=15. Illustrate the binary division steps using Non restoring binary division algorithm to calculate the number of litres of milk distributed to each customer.

Write the assembly code in Zero, One, Two and Three address instruction formats for the expression, k = (a+ (b-c) / (e \* (f + g))).