Decimal to Binary Algorithm

Write an algorithm that reports the binary equivalent to decimal number. Your algorithm should be listed as a set of numbered instructions. Write your instructions in English. Anyone who understands the primitives listed below should be able to follow the instructions and get the right answer. Type your algorithm in a text file and submit your solution on Easel.

Primitives:

1. Following instructions in order (starting at 1 and finishing when the last instruction is complete)
2. Jumping to a numbered instruction
3. Storing and retrieving values from variables. All variables are treated as decimal numbers.
4. Addition
5. Subtraction
6. Multiplication
7. Division
8. Integer Division (Division that keeps the whole number answer and loses the decimals)
9. Modulus (finding remainders of integer Division)

Example algorithm for Binary to Decimal Conversion:

1. Get a number that contains only 1's and 0's and store it in a variable named binary. This is the "binary" number we will show the decimal equivalent to.
2. Store the value 0 in a variable named answer.
3. Store the value 1 in a variable named bitValue.
4. If the binary number is 0 jump to the last instruction.
5. If the reminder of the binary number divided by 10 is 1 add to the answer the current value of the bitValue variable.
6. Store in the variable binary its own value divided by 10. Use integer division to do this.
7. Store in the variable bitValue its own value multiplied by 2.
8. Jump to step 4.
9. Report the value from the variable answer as the solution.