1.) Write the following regular expressions:

   a.) Binary numbers that are multiples of eight
   
   b.) Binary numbers that are an integer power of 2.
   
   c.) Valid C/Java integer constants that can be negative or positive, in decimal, octal, or hexadecimal.
   
   d.) A string literal without escape sequences
   
   e.) A block comment without nesting (/\* to \*/)
   
   f.) A string of a’s and b’s with an odd number of b’s.

2.) Using the Thompson’s algorithm construction from lecture, convert the following regular expression to an NFA (alphabet is \{a,b\}):

   \[ b? (ab)^{+}bb^{+} \]

3.) Using the Thompson’s algorithm construction from lecture, convert the following regular expression to an NFA (alphabet is \{a,b\}):

   \[ a+bab?a \]