1. True/False: If $L$ is a finite language, then there is guaranteed to be a CFG that generates $L$.

2. True/False: If $L$ is a finite language, then there is guaranteed to be a CFG that generates the complement of $L$.

3. True/False: If $L$ is a regular language without the empty string, then there is guaranteed to be a CFG that generates $L$.

4. True/False: If $L$ is a regular language without the empty string, then there is guaranteed to be a regular grammar that generates $L$.

5. Consider the following CFG:

   $$Q \rightarrow 0Q0 \mid 1Q1 \mid 1Q2 \mid 2Q1 \mid 2Q2 \mid \varepsilon$$

   Which of the following strings is generated?
   (a) 000  (b) 0120  (c) 0122  (d) None of the above

6. In succinct-ish English describe the language generated by the CFG from Question 5.

7. Which of the following is FALSE
   (a) A quine is a program that produces a copy of its own source code as its only output
   (b) In Escher’s lithograph “Drawing Hands”, the hands are drawing each other
   (c) Kurt Gödel received his Ph.D. at Princeton
   (d) “Squeamish Ossifrage” was encoded as part of an RSA challenge