

Problem 2. [3 marks]

Write a Context-Free Grammar for the language QCIRC over the ten-symbol alphabet $\{I, H, X, Z, \text{CNOT}, \text{TOF}, *, \otimes, (,)\}$. It can be typed or hand-written, but must be in PDF format and saved as a file `prob2.pdf`.

so: QCIRC

$S \rightarrow Q$

$Q \rightarrow I \mid H \mid X \mid Z \mid \text{CNOT} \mid \text{TOF} \mid (Q) \mid Q * Q \mid Q \otimes Q$

