Due Wednesday December 1

Do the following problems from Sipser’s *Theory of Computation*: 2.14, 4.3, 4.5, 5.2

1) Let $\text{EQ}_{\text{reg}} = \{(R_1, R_2) : R_1$ and $R_2$ are regular expressions and $L(R_1) = L(R_2)\}$. Prove that $\text{EQ}_{\text{reg}}$ is decidable.

2) Prove that $\overline{E_{TM}}$ is Turing-recognizable (in other words $E_{TM}$ is co-Turing-recognizable).