## Problem Set 6

1. Book, 8.22 . $[A D D$ and $P A L-A D D$ are in L$]$
2. Book, 8.27. [STRONGLY-CONNECTED is NL-complete]
3. Book, 9.19 . $\left[U S A T \in \mathrm{P}^{S A T}\right]$
4. Book, 9.17. [P contains a language not decidable by a 2DFA]
5. Book, 10.21 . [ $E Q_{\mathrm{BP}}$ is coNP-complete]
6. Book, 10.20 . $[\mathrm{RP} \cap \mathrm{coRP}=\mathrm{ZPP}]$
7.* Book, 10.19 . [if NP $\subseteq$ BPP then NP $=\mathrm{RP}$ ]

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### 18.404J / 18.4041J / 6.840J Theory of Computation

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