## $5.1 \& 5.2$

- 5.1
- $\mathrm{S}=\mathrm{W} / \mathrm{T}_{\mathrm{P}}=\mathrm{W} /\left(\mathrm{W}_{\mathrm{S}}+\left(\mathrm{W}-\mathrm{W}_{\mathrm{S}}\right) / \mathrm{p}\right)$
- $\left(\mathrm{W}-\mathrm{W}_{\mathrm{S}}\right) / \mathrm{p} \rightarrow 0$ when p increases. No matter how large $p$ is, we have the bound $\mathrm{S} \leq \mathrm{W} / \mathrm{W}_{\mathrm{s}}$.
- 5.2
- (a) Single process, DFS: 11 arcs traversed.
- (b) 2 processes, $P_{1}$ traverses 4 arcs and finds the solution. $S=11 / 4=2.75$. Anomaly: $S>2$ due to the different overall works in both cases.

