CSE 542 -	- Advanced	Data	<i>Structures</i>	and A	lgorithms

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Review Questions 18

Vour	Name
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Please print out this form (two-sided, if you can) and write your answers *legibly* in the spaces provided. If you can't write legibly, type.

1. Is every flow a preflow? Is every preflow a flow? If f is a preflow, but not a flow, what does that tell you about the function $\Delta(x)$?

2. In the bottom right figure on slide 4, which edges are admissible? Which vertices are balanced? If vertex d is selected in the next two steps, how do $\Delta(d)$ and d(d) change? How do $\Delta(e)$ and d(e) change?

3. The magnitude of the flows constructed by the augmenting path algorithm are always smaller than the max flow values $|f^*|$. How does the value of the initial preflow constructed by the general preflow-push method compare to $|f^*|$? As the algorithm progresses, how does the value of the preflow compare to the initial preflow value? How does it compare to $|f^*|$?