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Ch 6: 6.1, 6.2, 6.4, 6.5
6.6, 6.11, 6.14, 6.15, 6.16, *6.18

6.1:

Mutual exclusion: This applies to figure 6.1a with the cars because only one car can be using a given section of the road at a given time

Hold and wait: They are all waiting for each other to go first in this situation

No preemption: Once a car starts moving, there's not much you can do to get it out of the way

Circular wait: If a car has already started moving into the turn lane, or if they all make a turn into their turns they will all be deadlocks.

6.2:

Two key factors of deadlock avoidance that could be applied to the scenario in figure 6.1 are not starting a process if its demands might lead to deadlock, and don't grant an incremental resource request to a process if this allocation might lead to deadlock. Obviously there are rules on the road so at a four way stop, this situation doesn't seem to happen, and when it does, someone has to make a decision to go first.

6.4:

Deadlock occurs inevitably in the fatal region. The existence of a fatal region depends on the logic of the two process. These two processes do not run into that problem.

6.15:

$c = \{3, 2, 9, 7\}$ $a = \{1, 1, 3, 2\}$

$n = \{2, 1, 6, 5\}$

6.16:

- a. 1. 3
- 2. 2
- 3. 1
- 4. 6
- 5. 5
- 6. 4