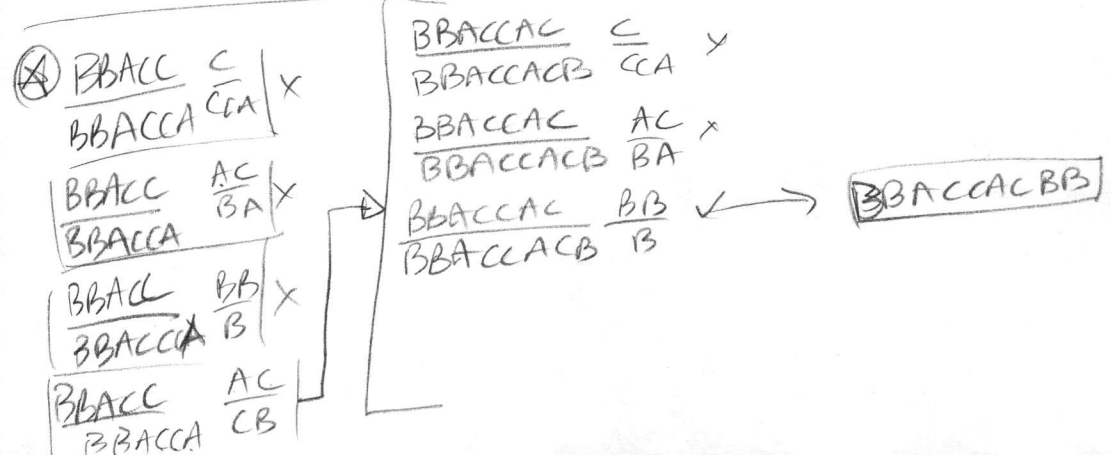
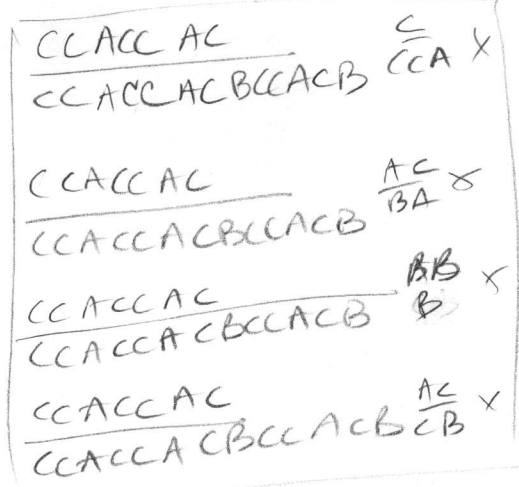
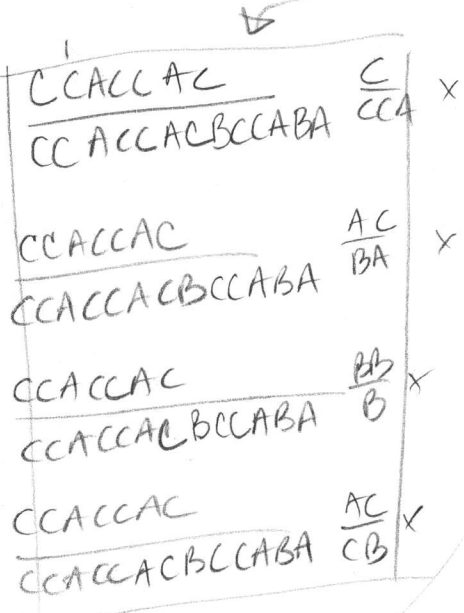
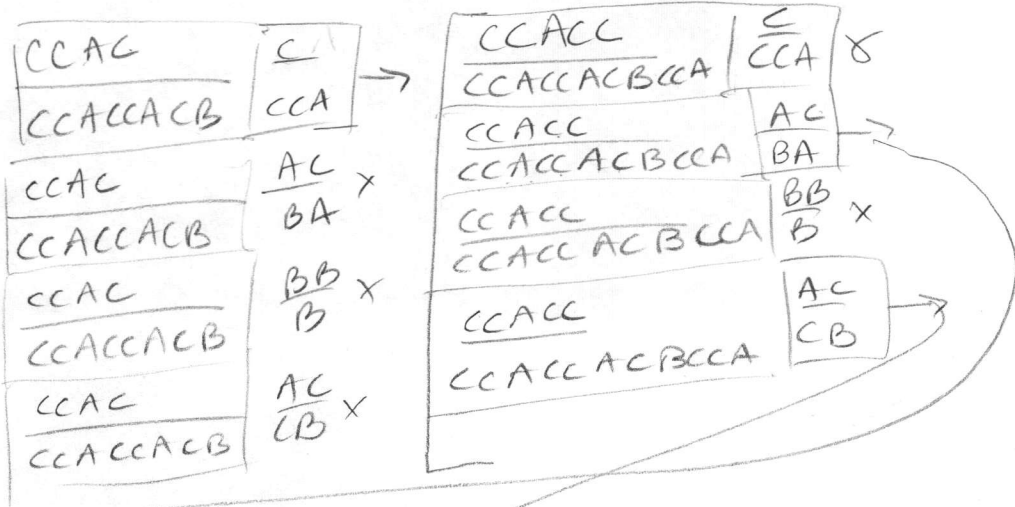
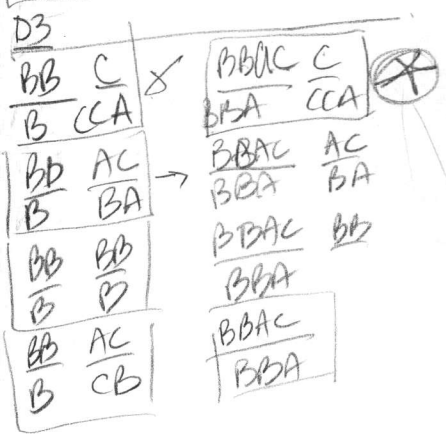


D2 goes nowhere (see Pg 1)



Jason Seminars
N125 17506
2015-02-21
Homework #1
Q1, b DFS over
state space
Artificial Intelligence

② cyclic state space

given ⁴dominoes: $\frac{ab}{x}$ $\frac{c}{x}$ $\frac{cd}{x}$ $\frac{de}{x}$ $\frac{e}{x}$

It's possible to create a state space that is not a tree:

$$\begin{array}{c}
 \frac{ab}{x} \\
 \swarrow \quad \searrow \\
 \frac{ab}{x} + \frac{cd}{x} = \frac{abcd}{xx} \quad \frac{ab}{x} + \frac{c}{x} = \frac{abc}{xx} \\
 \downarrow \qquad \qquad \downarrow \\
 \frac{abcd}{xx} + \frac{e}{x} = \boxed{\frac{abcde}{xxx}} \quad \frac{abc}{xx} + \frac{de}{x}
 \end{array}$$

③

①

$\begin{array}{c} C \quad C \\ \hline CCA \quad CCA \end{array} \rightarrow$

$\begin{array}{c} C \quad CC \\ \hline CCA \quad CCACCA \end{array} \times$

$\begin{array}{c} AC \quad C \\ \hline BA \quad CCA \end{array} \times$
 $\begin{array}{c} BB \quad C \\ \hline CB \quad CCA \end{array} \times$
 $\begin{array}{c} AC \quad C \\ \hline CB \quad CCA \end{array} \times$

$\begin{array}{c} AC \quad CC \\ \hline BA \quad CLACCA \end{array} \times$
 $\begin{array}{c} BB \quad CC \\ \hline CB \quad CLACCA \end{array} \times$
 $\begin{array}{c} AC \quad CC \\ \hline CB \quad CLACCA \end{array} \times$

②

$\begin{array}{c} C \quad AC \\ \hline CA \quad BA \end{array} \times$

$\begin{array}{c} AC \quad AC \\ \hline BA \quad BA \end{array} \checkmark$

~~ACAC~~
BABA

$\begin{array}{c} BB \quad AC \\ \hline CB \quad BA \end{array} \checkmark$

$\begin{array}{c} AC \quad AC \\ \hline CB \quad BA \end{array} \times$

④ A sequence of dominoes to create a cycle:

$\begin{array}{c} a \quad b \quad c \quad x \quad y \quad z \\ \hline ab \quad c \quad d \quad x \quad y \quad zd \end{array}$

③

$\begin{array}{c} C \quad BB \\ \hline CCA \quad B \end{array} \times$

$\begin{array}{c} AC \quad BB \\ \hline BA \quad B \end{array} \times$

$\begin{array}{c} BB \quad BB \\ \hline B \quad B \end{array} \rightarrow$

$\begin{array}{c} AC \quad BB \\ \hline CB \quad B \end{array} \times$

④

$\begin{array}{c} C \quad AC \\ \hline CCA \quad CB \end{array} \times$

$\begin{array}{c} AC \quad AC \\ \hline BA \quad CB \end{array} \times$

$\begin{array}{c} BB \quad AC \\ \hline CB \quad CB \end{array} \times$

$\begin{array}{c} AC \quad AC \\ \hline CB \quad CB \end{array} \rightarrow$

Jason Seminary
Artificial Intelligence
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Homework #1
~~AND~~ N12517906