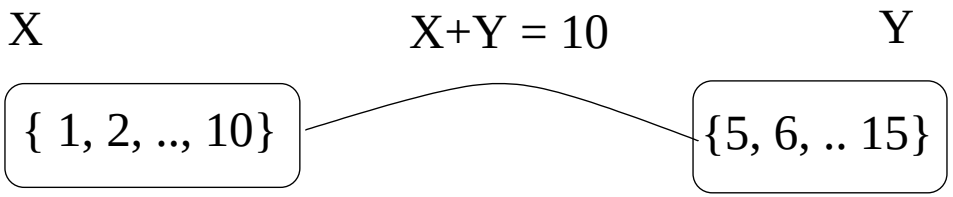
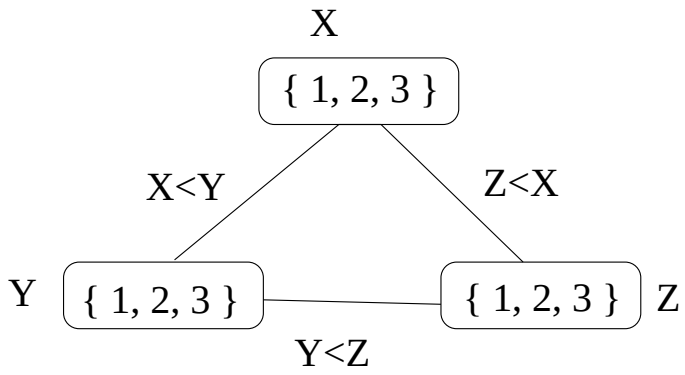
Arc consistency: Example *(courtesy of R. Dechter, UC-Irvine)*

Apply the REVISE procedure to the following example



Arc consistency (AC) *(courtesy of R. Dechter, UC-Irvine)*

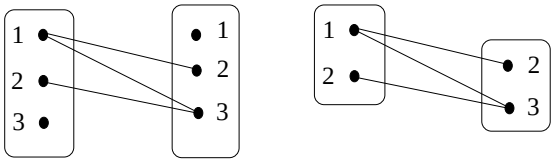
AC can discover inconsistency



Constraint propagation

(courtesy of R. Dechter, UC-Irvine)

After Arc-consistency:



After Path-consistency:

Are these CSPs the same?

Which one is more explicit?

Are they equivalent?

The more propagation,

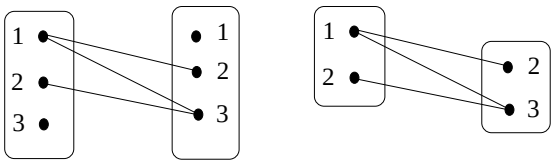
the more explicit the constraints,

the more search is directed towards a solution.

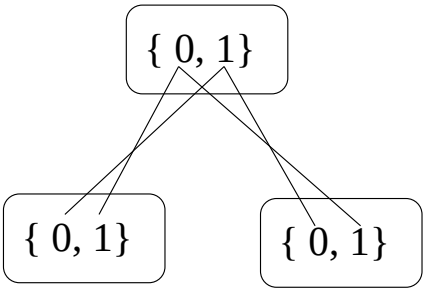
Constraint propagation

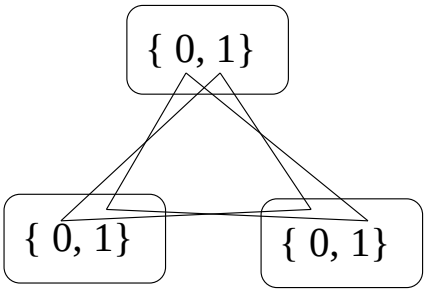
(courtesy of R. Dechter, UC-Irvine)

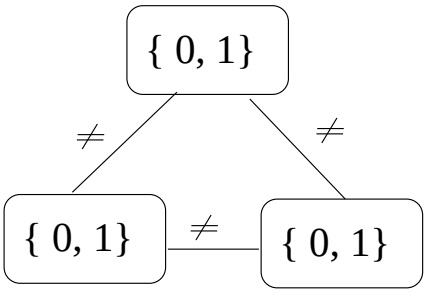
After Arc-consistency:

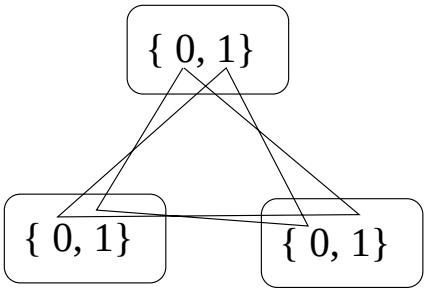


Path-consistency:









$\longrightarrow$ A clique of size n in the micorstructure is..?

Riddle 1

The domain of a CSP variable can be expressed as a constraint.

Take an example, and show how you would right such a constraint.

Using operations on relations (e.g., intersection, union, composition etc.) express the action of the REVISE procedure as some operations on relations *(adapted from R. Dechter, UC-Irvine)*