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Week 8 Quiz

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Q1 - CSP formalization

10.0/10.0 points (graded)
Formalizing a CSP requires:

- A set of variables
- A set of domains for each variable
- A set of functions
- A set of constraints



Submit

You have used 1 of 1 attempt

Q2 - CSP problem formalization

10.0/10.0 points (graded)

For the 8-queen example, the second formalization seen in lecture is better than the first formalization because the domain of each variable in the second formalization is smaller which makes it easier to find a solution.

True	V

False

You have used 1 of 1 attempt

Q3 - Solving CSPs

10.0/10.0 points (graded) Solving the CSP means:

- ☑ Finding the assignment(s) that satisfy all constraints.
- Finding the assignment(s) that satisfy some constraints.



Submit

You have used 1 of 1 attempt

Q4 - Forward checking

10.0/10.0 points (graded)

Arc consistency can find dead-end assignments which cannot be found by Forward Checking:

True	~

False

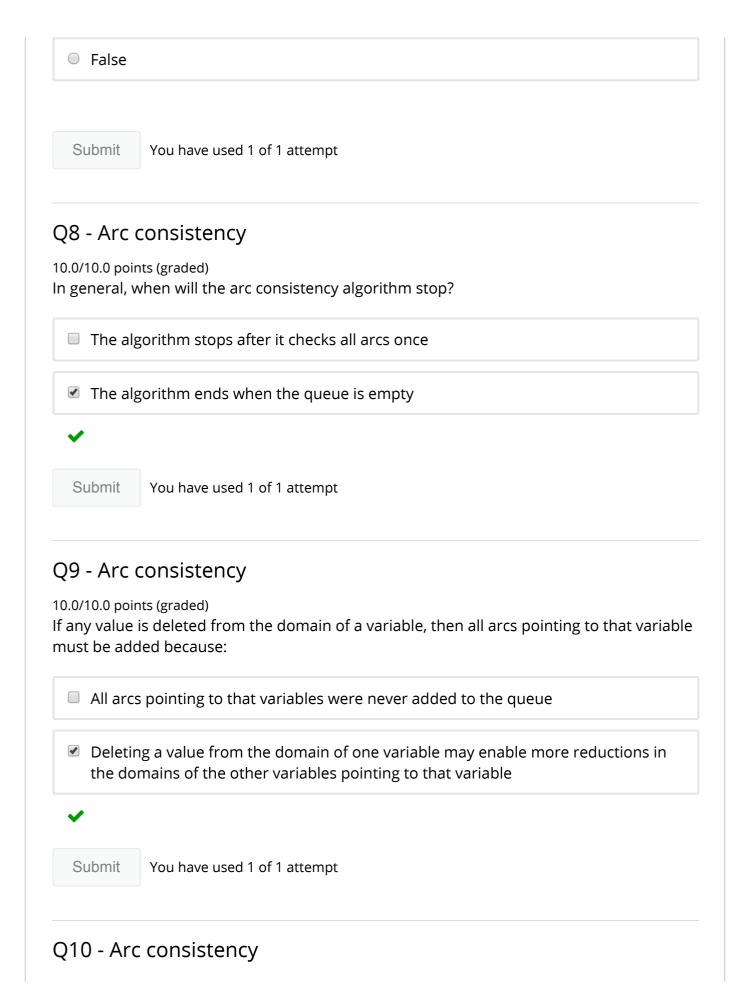
Submit

You have used 1 of 1 attempt

Q5 - Backtracking search and arc consistency

10.0/10.0 points (graded)

Check all that apply.
$ \mathbb{Z} \to Y $ is consistent if and only if for every value x of X, there is some allowed y
\square X \rightarrow Y is consistent if and only if for every value y of Y, there is some allowed x
Backtracking search is a Breadth-first search with one variable assigned per node
☑ Backtracking search is a Depth-first search with one variable assigned per node
Submit You have used 1 of 1 attempt
Q6 - Least Constraining Values (LCV) 10.0/10.0 points (graded) Given a variable, LCV chooses the least constraining value, i.e.:
▼ the one that rules out the fewest values in the remaining variables
the one that rules out most values in the remaining variables
Submit You have used 1 of 1 attempt
Q7 - Binary constraints 10.0/10.0 points (graded) It is possible to reformulate global constraints (involving 3 or more variables) as binary constraints:
True ✓



10.0/10.0 points (graded) In checking the consistency of an arc $X_i o X_j$, if D_i , the domain of X_i , is revised down to the empty set, then the CSP has no consistent solution:

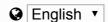
● True

False

You have used 1 of 1 attempt Submit

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