

Survey 8

* Required

1. Please give your name *

2. Please give your CUHK student ID *

3. How much of Assignment 7 have you completed? *

Mark only one oval.

- ☐ What? There is an assignment!?
- ☐ Seen it.
- ☐ Thought about it.
- ☐ Tried it.
- ☐ Finished it!!

4. How many Course 2 Modules 4 & 5 lectures have you watched? *

Mark only one oval.

- ☐ None
- ☐ 1
- ☐ 2-3
- ☐ All

5. What kind(s) of constraints do we have in basic packing problems? You can tick more than one.

*

Check all that apply.

- ☐ Alldifferent constraints
- ☐ Counting constraints
- ☐ Cumulative constraints
- ☐ Non-overlap constraints
- ☐ Precedence constraints

6. How can we enforce in our model that no two rectangles can overlap each other in space? You can tick more than one. *

Check all that apply.

- ☐ Inequalities
- ☐ Disequalities
- ☐ Disjunctive globals
- ☐ Diffn globals
- ☐ Cumulative globals

7. The cumulative constraint is very similar/closely related to the diffn constraint. Each task can be thought of a rectangle with duration as length and resource requirement as height. Cumulative amounts to "packing" these rectangles into a big rectangle defined by maximum resource and time available. Given the same set of rectangles. A diffn constraint correspond to two cumulative constraints (one in x- and one in y-direction). What is the relationship between the cumulative constraints and diffn? *

Mark only one oval.

- ☐ Cumulatives are satisfied if and only if diffn is satisfied
- ☐ If cumulatives are satisfied, then diffn is satisfied
- ☐ If cumulatives are satisfied, then diffn may be satisfied
- ☐ If diffn is satisfied, then cumulatives are satisfied
- ☐ If diffn is satisfied, then cumulatives may be satisfied

8. How can we model a rectilinear shape in a packing problem? *

Mark only one oval.

- ☐ A collection of squares with specific orientations and relative positions to the "origin" of the shape
- ☒ A collection of rectangles with specific orientations and relative positions to the "origin" of the shape
- ☐ A collection of collections of squares with specific orientations and relative positions to the "origin" of the shape
- ☐ A collection of collections of rectangles with specific orientations and relative positions to the "origin" of the shape
- ☐ NONE of the above

9. How can we model a rotatable rectilinear shape in a packing problem? *

Mark only one oval.

- ☐ A collection of squares with specific orientations and relative positions to the "origin" of the shape
- ☐ A collection of rectangles with specific orientations and relative positions to the "origin" of the shape
- ☐ A collection of collections of squares with specific orientations and relative positions to the "origin" of the shape
- ☒ A collection of collections of rectangles with specific orientations and relative positions to the "origin" of the shape
- ☐ NONE of the above

10. What is a symmetry? *

Mark only one oval.

- ☐ Mapping assignments in a solution to another set of assignments results in a solution
- ☐ Mapping variables in a solution to other variables results in a solution
- ☐ Mapping values in a solution to other values results in a solution
- ☐ Mapping constraints in the model to other constraints still produces a solution
- ☐ Mapping variables in the model still produces a solution

11. What is a variable symmetry? *

Mark only one oval.

- ☐ Mapping assignments in a solution to another set of assignments results in a solution
- ☐ Mapping variables in a solution to other variables results in a solution
- ☐ Mapping values in a solution to other values results in a solution
- ☐ Mapping constraints in the model to other constraints still produces a solution
- ☐ Mapping variables in the model still produces a solution

12. What is a value symmetry? *

Mark only one oval.

- ☐ Mapping assignments in a solution to another set of assignments results in a solution
- ☐ Mapping variables in a solution to other variables results in a solution
- ☐ Mapping values in a solution to other values results in a solution
- ☐ Mapping constraints in the model to other constraints still produces a solution
- ☐ Mapping variables in the model still produces a solution

13. How many row and column symmetries are there in an $n \times m$ matrix model? *

Mark only one oval.

- ☐ $n + m$
- ☐ $n + m - 1$
- ☐ $n + m - 2$
- ☐ nm
- ☐ $(n-1)(n-1)$
- ☐ $n!m!$
- ☐ $(n-1)!(m-1)!$

14. How many symmetry breaking constraint does the LexLeader method add for an $n \times m$ matrix model? *

Mark only one oval.

- ☐ $n + m$
- ☐ $n + m - 1$
- ☐ $n + m - 2$
- ☐ nm
- ☐ $(n-1)(n-1)$
- ☐ $n!m!$
- ☐ $(n-1)!(m-1)!$

15. How many symmetry breaking constraint does the Double Lex method add for an $n \times m$ matrix model? *

Mark only one oval.

- ☐ $n + m$
- ☐ $n + m - 1$
- ☐ $n + m - 2$
- ☐ nm
- ☐ $(n-1)(n-1)$
- ☐ $n!m!$
- ☐ $(n-1)!(m-1)!$

16. How can we break value symmetries in a permutation problem? You can tick more than one. *

Check all that apply.

- ☐ Use <
- ☐ Use lex_lesseq
- ☐ Use LexLeader
- ☐ Use value_precede_chain
- ☐ ALL of the above

17. Given two feasible solutions, s1 and s2, of an optimization problem. Which of the following statement is true? You can tick more than one.

Check all that apply.

- ☐ A feasible solution is an optimal solution
- ☐ An optimal solution is a feasible solution
- ☐ If s1 dominates s2, then s1 is symmetric to s2 and s2 is symmetric to s1
- ☐ If s1 is symmetric to s2, then s1 dominates s2 or s2 dominates s1
- ☐ NONE of the above

18. Have you attempted Workshop 8 yet? *

Mark only one oval.

- ☐ No
- ☐ Thought about it
- ☐ Completed it

19. How much of Assignment 8 have you completed? *

Mark only one oval.

- ☐ What? There is another ASSIGNMENT!?
- ☐ Seen it.
- ☐ Thought about it.
- ☐ Tried it.
- ☐ Finished it!!

Powered by

 Google Forms