Survey 5

* Required

1. **Please give your name** *

2. **Please give your CUHK student ID** *

3. **How much of Assignment 4 have you completed?** *
   Mark only one oval.
   - What? There is an assignment!?
   - Seen it.
   - Thought about it.
   - Tried it.
   - Finished it!!

4. **Have you enrolled into the private session of Course 2 (Advanced Modeling) yet?** *
   Mark only one oval.
   - Yes
   - No

5. **How many Course 2 Module 1 lectures have you watched?** *
   Mark only one oval.
   - None
   - 1
   - 2-3
   - All

6. **Have you "subscribed" to the Discussion Forum for the Private Session of the Advanced Modeling MOOC on Coursera yet?** *
   Mark only one oval.
   - Yes
   - No
   - Don't know how to do that!

7. **What are the possible symptoms of a model with bugs? You can tick as many as you want.** *
   Check all that apply.
   - [ ] No solutions
   - [ ] Only 1 solution
   - [ ] Too few solutions
   - [ ] Too many correct solutions
   - [ ] Too many wrong solutions

8. **Which of the following are debugging tools for MiniZinc models? You can tick more than one.** *
Check all that apply.

- [ ] Exception handling
- [ ] Assertions
- [ ] Step-by-step execution tracing
- [ ] Trace
- [ ] Printing

9. **What is relational semantics?** *
Mark only one oval.

- ◯ Bijection functional semantics
- ◯ Every constraint should be understood as a database
- ◯ Array out of bound
- ◯ Division by zero
- ◯ Undefined results from partial functions mean false

10. **Which of the following is a solution of the following code fragment? You can tick more than one.** *

```
array[1..2] of var 0..1: x;
var 1..3: i;
constraint x[i] >= 1;
```

Check all that apply.

- [ ] x = [1,0]; i = 1;
- [ ] x = [1,1]; i = 1;
- [ ] x = [0,1]; i = 2;
- [ ] x = [1,1]; i = 2;
- [ ] x = [0,0]; i = 3;
- [ ] x = [0,1]; i = 3;
- [ ] x = [1,0]; i = 3;
- [ ] x = [1,1]; i = 3;

11. **Which of the following is a solution of the following code fragment? You can tick more than one.** *

```
array[1..2] of var 0..1: x;
var 1..3: i;
constraint x[1] = 0;
constraint i <= 2 -> x[i] >= 1;
```

Check all that apply.

- [ ] x = [1,0]; i = 1;
- [ ] x = [1,1]; i = 1;
- [ ] x = [0,1]; i = 2;
- [ ] x = [1,1]; i = 2;
- [ ] x = [0,0]; i = 3;
- [ ] x = [0,1]; i = 3;
- [ ] x = [1,0]; i = 3;
- [ ] x = [1,1]; i = 3;

12. **Which of the following is a solution of the following code fragment? You can tick more than one.** *

```
array[1..2] of var 0..1: x;
var 1..3: i;
constraint x[i] <= 0 -> x[i+1] >= 1;
```

Check all that apply.

- [ ] x = [1,0]; i = 1;
- [ ] x = [1,1]; i = 1;
- [ ] x = [0,1]; i = 2;
- [ ] x = [1,1]; i = 2;
- [ ] x = [0,0]; i = 3;
- [ ] x = [0,1]; i = 3;
- [ ] x = [1,0]; i = 3;
- [ ] x = [1,1]; i = 3;

13. **What can you do if your model has a wrong solution among other correct solutions? You can tick more than one.** *

Check all that apply.

- [ ] Isolate and examine the constraint that should have removed the wrong solution
- [ ] Add constraints to remove the unwanted solutions
- [ ] Add an objective or strengthen the objective
- [ ] Add a known solution as constraints to the model
- [ ] Identify the problematic constraint by relaxing constraints one by one
- [ ] Construct a smaller instance of the problem with known solutions

14. **What can you do if your model has too many correct solutions? You can tick more than one.** *
Check all that apply.

- [ ] Isolate and examine the constraint that should have removed the wrong solution
- [ ] Add constraints to remove the unwanted solutions
- [ ] Add an objective or strengthen the objective
- [ ] Add a known solution as constraints to the model
- [ ] Identify the problematic constraint by relaxing constraints one by one
- [ ] Construct a smaller instance of the problem with known solutions

15. **What can you do if your model has missing solutions? You can tick more than one.** *
Check all that apply.

- [ ] Isolate and examine the constraint that should have removed the wrong solution
- [ ] Add constraints to remove the unwanted solutions
- [ ] Add an objective or strengthen the objective
- [ ] Add a known solution as constraints to the model
- [ ] Identify the problematic constraint by relaxing constraints one by one
- [ ] Construct a smaller instance of the problem with known solutions

16. **Which of the following are ways to improve your model? You can tick more than one.** *
Check all that apply.

- [ ] Add constraints
- [ ] Make loops efficient
- [ ] Choose a model that is smaller in size
- [ ] Use global constraints whenever possible
- [ ] Use set variables whenever possible
- [ ] Avoid disjunctions, negations, implications and existential loops if possible
- [ ] Use arrays whenever possible
- [ ] Use an objective whenever possible

17. **Have you attempted Course 2 Workshop 1 yet?** *
Mark only one oval.

- ◯ No
- ◯ Thought about it
- ◯ Completed it

18. **How much of Course 2 Assignment 1 have you completed?** *
Mark only one oval.

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