Last name	
First name	
Group	
Tutorial Teacher	

Grade	

Algorithmics
Undergraduate 2nd year - S3
Midterm #3 (C3)
29 October 2018 - $13:30$
Answer Sheets

1	
2	
3	
4	
5	

*Answers 1* (**Hashing Strongly Connected** – *4 points*)

1. Give a direct method of hashing:

_____

2. Which collision resolution method does not need a hash table whose size is greater than the number of keys to be hashed ?

_____

3. Which kind of search is incompatible with the hashing?

_____

4. With which collision resolution method do secondary collisions appear?

_____

5. Draw the corresponding graph to `G`.
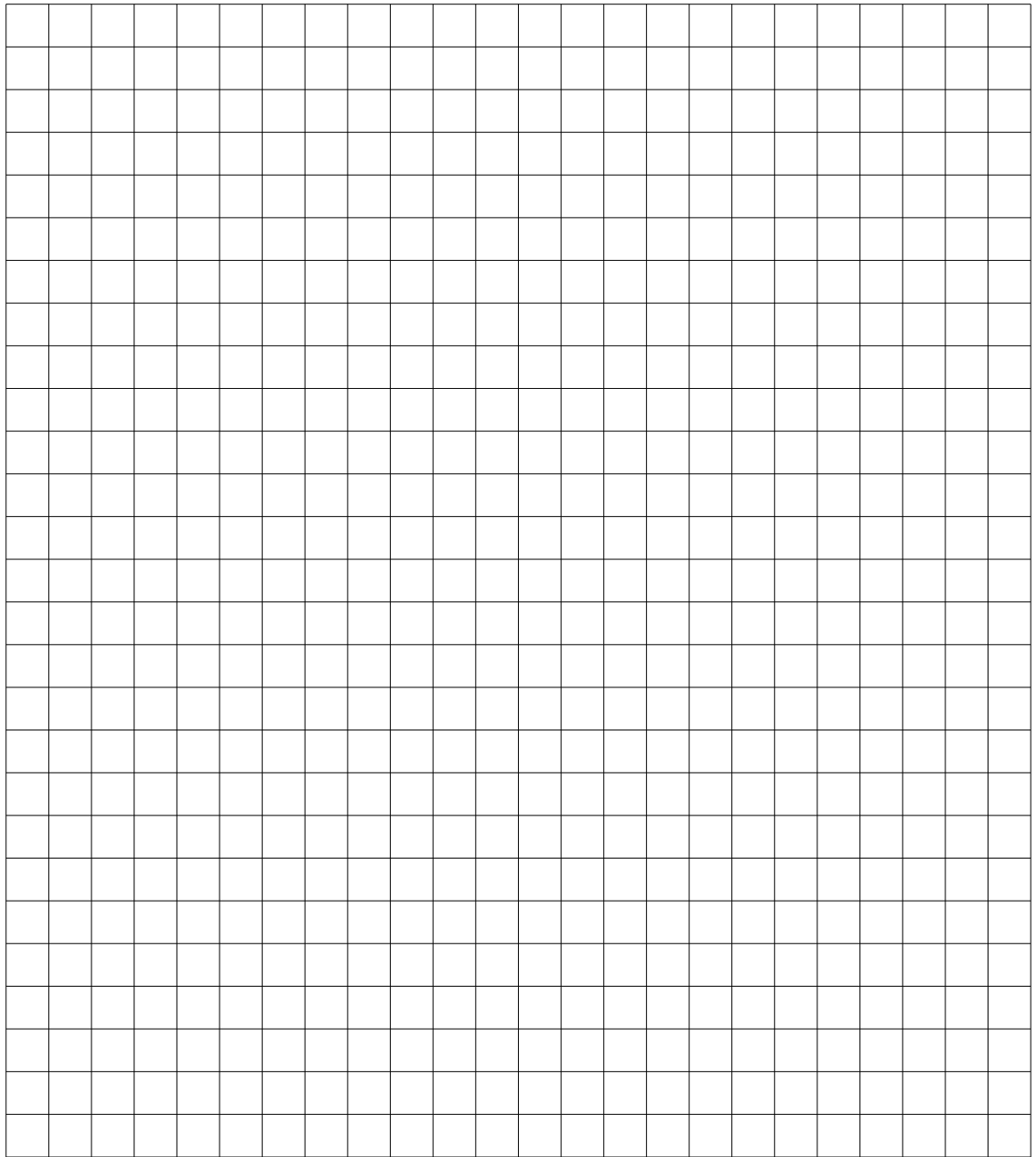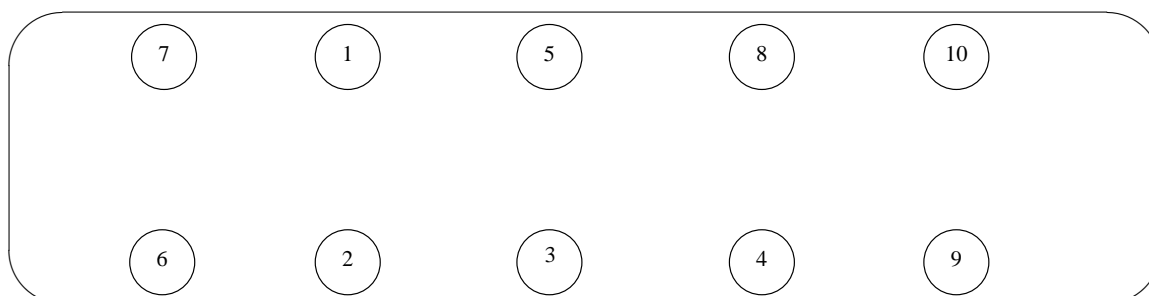
6. *Indegrees of all vertices of graph* `G`:

	1	2	3	4	5	6	7	8	9	10
InDegree										

Answers 2 (**Equality** – *5 points*)

Specifications: The function `same(T, B)` tests whether T, a general tree in "classical" representation, and B, a general tree in *first child - right sibling* representation, are identical.

Answers 3 **Levels** *– 4 points*)

Specifications: The function `levels(`T`)` builds a list of the keys of T level by level.
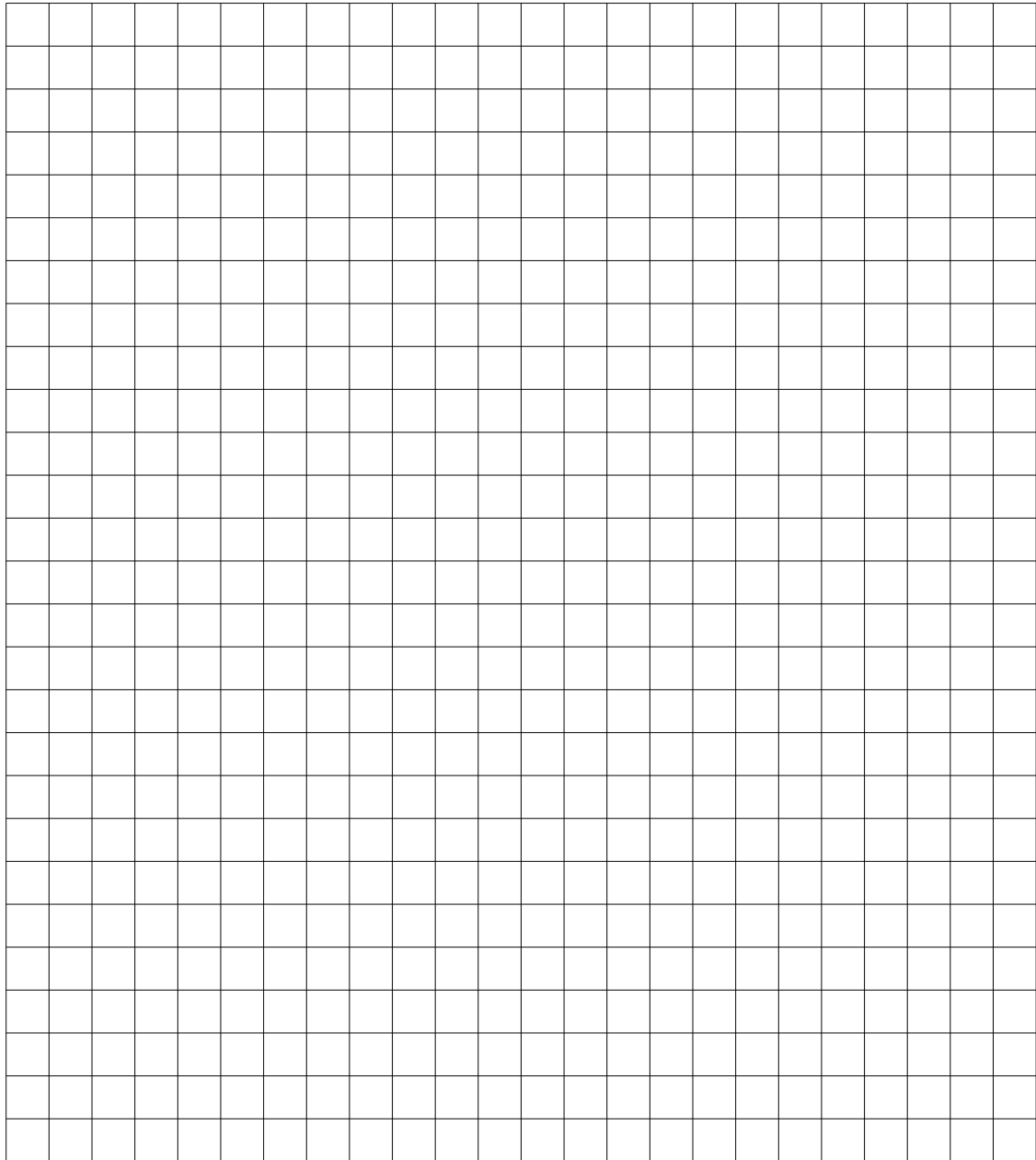
Answers 4 (**Maximum Gap** – ***4 points***)

Specifications: The function `maxgap(B)` computes the maximum gap of the B-tree B.

Answers 5 (**B-Trees and Mystery** – ***3 points***)

		Returned result	Call number
1.	(a) `mystery(`B_1`, 1, 77)`		
	(b) `mystery(`B_1`, 10, 30)`		

2. *What does **mystery(B, a, b)** calculate?*

_____

_____

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