Last name	
First name	
Group	

Grade	

Algorithmics
Undergraduate 2^{nd} year (S3)
Midterm #3 (C3)
24 October 2016 - 14 : 45
Answer Sheets

1	
2	
3	
4	
5	
6	

Answers 1 **(Linear probing –** ***2 points*****)**

Present the collision resolution using the linear probing principle with an offset coefficient $d = 4$:

0	
1	
2	
3	
4	
5	
6	
7	
8	
9	
10	

Answers 2 **(Hashing: Valid tables –** ***3 points*****)**

Surround the tables which can not be the result of insertion of the keys (regardless of arrival order of these keys).

A - B - C - D

Answers 3* Hashing: Questions... *(3 points)

1. Three properties: (a) _____

   (b) _____ (c) _____

2. What is the cause of a secondary collision?

   _____

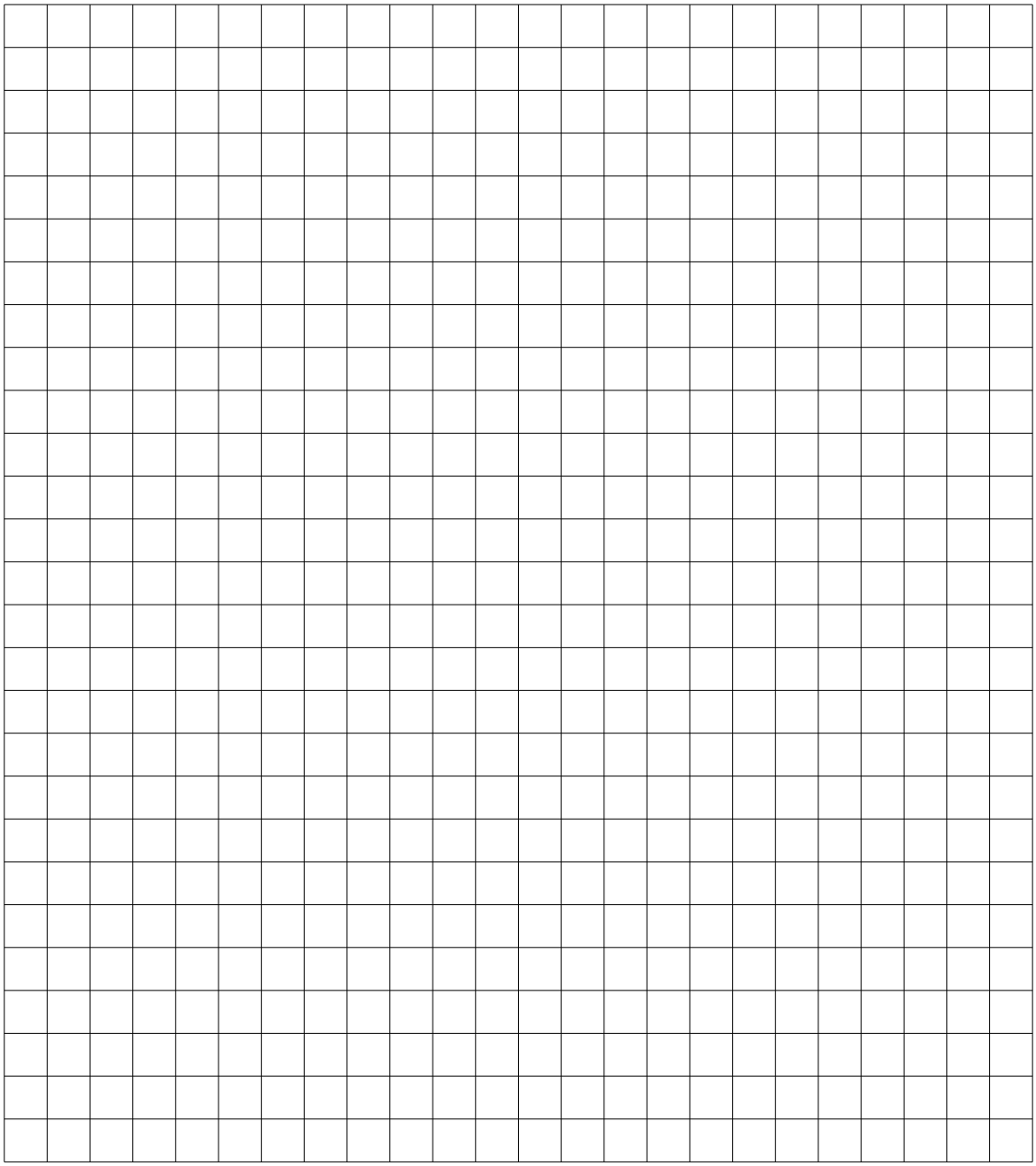
   _____

3. Collisions set apart, what phenomenon is caused by the linear probing and what do we envisage to solve it?

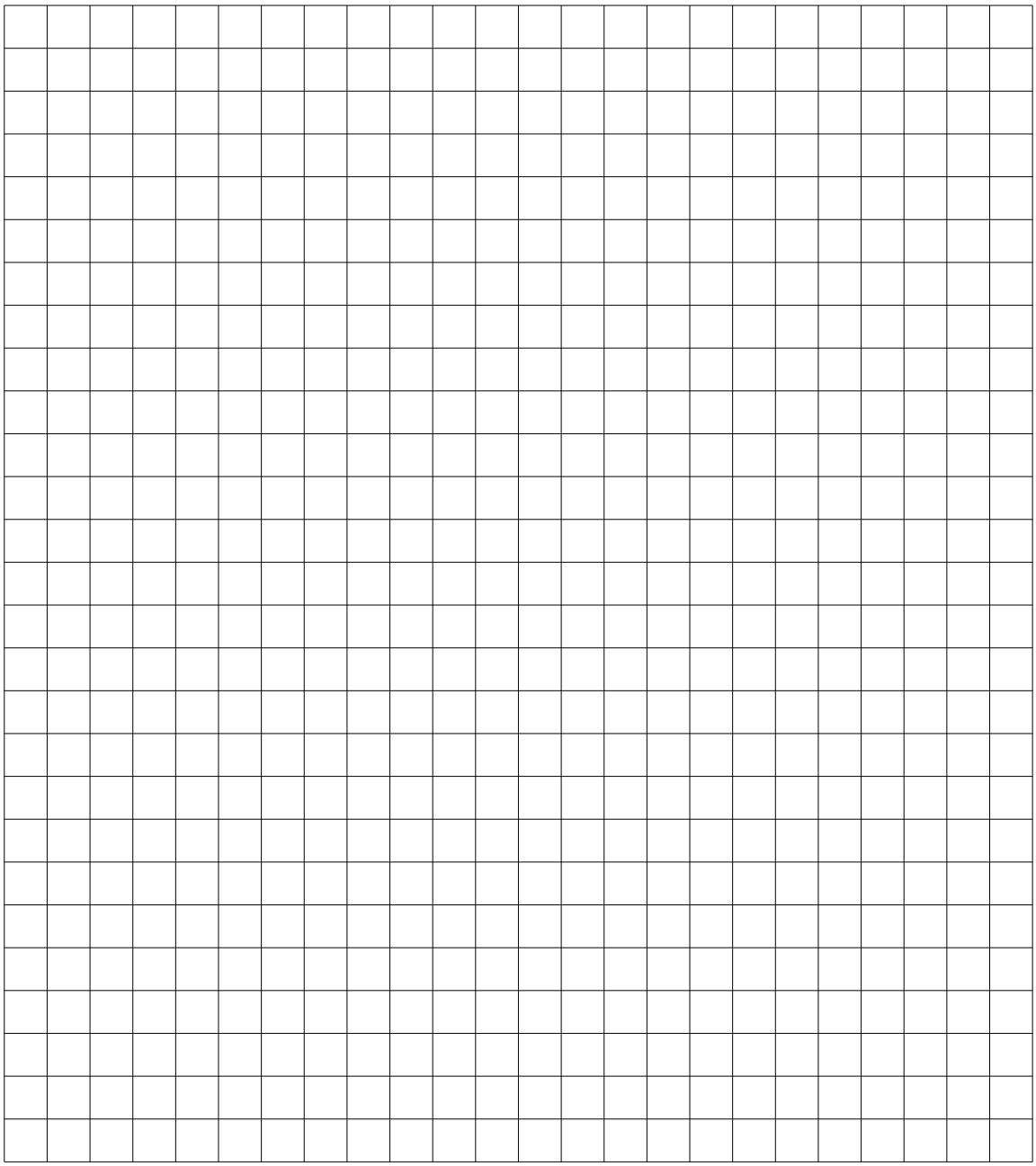
   _____

   _____

***Answers 4* (Average Arity of a General Tree – *4 points*)**



Answers 5 **(Equality – *5 points*)**



Answers 6 **(B-Trees and Mystery – *3 points*)**

1.

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

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