

# Class 1 - 8/27/03

Discrete math

web address  
<http://www.cs.umd.edu/~hoehberg>

class office

08/27

Web Diagram Results

Shank - 1, 24 Chris 2, 25 David 3 Sam 4 Blake 5 Shaun 6  
Drew 7 B. 8 Brian 9 Casper 10 Heather 11 Labrosse 12 Tyler 13  
Todd 14 Samia 15 Tim 16 Matt 17 Nolan 18 Robin 19 Russ 20  
Will 21 Travis 22 Joseph 23

Aug 29

Permutation in groups

class notes

Q1 Can a cheater succeed at being last?

A1 A cheater can always add one last line to become the last note taker.

Proof: A bottom-most line may be added to redirect any note taker to any position.

Q2 Can a notetaker add a single line at the top to place himself or herself in that position?

A2 yes.

Q3 Add at any altitude?

A3 yes.

Notes = 60 pts

Final = 150 pts

2 exams = 200 pts

Home work = 170 pts \* very important for learning

} Grading Scheme

HW Q1 Can I obtain the permutation (rearrangement)?  
 Initial numbers: 1 2 3 4 5  
 Final numbers: 5 4 3 2 1

Does it work if so  
 If not explain why

Q2 What is the least # of horizontal lines to reverse 5 elements?

Q3 What is the least # of horizontal lines to reverse this

1 2 3  
 1 1 1  
 3 2 1

Q4 What is the least # of lines to reverse n elements?

1 2 3 4 5 6 7 ... n  
 1 1 1 1 1 1 1  
 n n-1

Q5 Prove that any permutation of n elements can be obtained by this method?