MIDTERM 1 REVIEW

ENGI 1331

MATERIALS FOR THE EXAM

- **<u>What you need to bring</u>**:
  - Your computer
  - Charger (if necessary but highly recommended)
  - Pen/Pencil
- **<u>What will be provided</u>**:
  - The exam prompt
  - Algorithm Sheet (for your reference)

PART 1 TOPICS

- Matrix Creation and Extraction
- Matrix Functions
- Problem solving (maximizing/minimizing)
- Imaging and basic masking
- Data Table Manipulation

PART 1 TYPE QUESTIONS:

Let a matrix *A* be defines in MATLAB workspace as:

A **=** [-2, 3, 1; 4, -2, 1]

1. What will be the output of the following: ***B*** = A(:, 3)
2. What will be the output of the following: ***C*** = [A', [-8; 4; 2]; 9, 7, -2]

OTHER PRACTICE FOR PART 1

- Debugging (Review Problems 17.23 - 17.25)
- CC problems from the book
- Create random matrices and work with a friend.
    - You can practice tracing simply by using MATLAB to check yourself!

PART 2 TOPICS

- Matrix Creation and Extraction
- Matrix Functions
- Problem solving (maximizing/minimizing)
- Imaging and basic masking
- Data Table Manipulation

IMAGING AND BASIC MASKING

- Project 1
- Basic Examples of masking from class

PROBLEM SOLVING

- Posted problems from Wednesday (06.15.16)
- MA1: Problem #1 Adaptation
  - Given a user defined amount of fence, what is the greatest area of field you can enclose?
  - Given a user defined area of field to enclose, what is the minimum amount of fence you need?
- You can use the following website to practice different types of these problems:
  - https://www.math.ucdavis.edu/~kouba/CalcOneDIRECTORY/maxmindirectory/MaxMin.html

DATA TABLE MANIPULATION

- Sample Problem #1 (posted to BB)
- Review Problems 16.1 - 16.5 (all review problems for MATLAB Variable and Data Types Chapter
- Create questions to answer about the temperature data