

Midterm examination information:

The Midterm examination will cover everything through the end of week 3.

Bring your ID card and present it when handing in your examination

You may bring:

- 1 sheet of paper (8.5"x11") of notes, 1 side only

You may not use:

- Calculators
- Books

Sample exam questions:

Section 1: Short answer

- There may be one or two questions about the history of computing

ex: What will the following command do?

```
a(3) = 100;
```

Section 2: Find the error, if any.

ex:

```
x = [1,3,5,7];  
disp(x(3))  
if( x(2)>x(3) | x(2)=x(4) )  
    disp(x)  
end
```

Section 3: Display the output. Don't worry about spacing unless text is in single quotes, in which case indicate a space with either an underscore or a ^ character.

ex:

```
x = [1,3,5,7];  
y = [2,4,6,8];  
if( x(1) > y(2) )  
    disp('The values in x: ')  
    disp(x)  
else  
    disp(y)  
end  
disp(y')
```

Section 4: Write a program.

ex:

Write a program that takes as input two numbers, A and B. Find the greatest number. If this number is greater than 50, set it equal to 50. Display both numbers to the screen on the same line.

```
A = input('Enter A:');  
B = input('Enter B:');  
if(A>B)  
    if(A>50)  
        A = 50;  
    end  
else  
    if(B>50)  
        B = 50  
    end  
end  
disp([A,B])
```

Reexamining if statements:

A university is trying to promote diversity by allowing in a higher percentage of students who are very tall or very short. However, the school still cares about SAT scores. You get an overall score based on your height and SAT score. If it is above 100 points, you get into the school.

```
gender = input('Enter gender (m or f): ', 's');  
height = input('Enter height in feet: ');  
sat = input('Enter SAT score (0-2400): ');  
score = sat/20;
```

```
if(gender=='m' | gender=='M')  
    if(height > 6)  
        score = score + 10  
    elseif(height<5)  
        score = score + 30  
    else  
        score = score - 10  
    end  
elseif(gender=='f' | gender=='F')  
    if(height > 6)  
        score = score + 40  
    elseif(height<5)  
        score = score + 10  
    else  
        score = score - 20  
    end  
end  
disp(['Your score is ', num2str(score)])  
if(score >= 100)  
    disp('Hooray, you are in!')  
else  
    disp('Boooo... go home!')  
end
```