

# Course Overview

Wednesday, January 27, 2010

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## General Notes

- The exam is curved.
- 70% is not the cutoff. It's a good target
- NO CELL PHONES
- BE PUNCTUAL. HARD DEADLINE
- This course is about passing, not understanding
- Kill answers by process of elimination
  - very effective!
- substitute in answer to weed it.
- get an approved calculator

## Example

- use log identities to evaluate numerically

$$\log_3 \left( \frac{3}{2} \right) + \log_3 (12) - \log_3 (2)$$

A) 0.95

B) 1.33

C) 2.0

D) 2.20

$$\log_3 (3) - \log_3 (2) + \log_3 (4) + \log_3 (3) - \log_3 (2)$$

OR

$$\log_3 \left( \frac{3 \cdot 12}{2} \right) = \log_3 (9) = 2$$

$$r^2 = 1 - \tan^2 \theta \Rightarrow \text{redundant}$$

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$$x^2 + y^2 = 1 - \left(\frac{y}{x}\right)^2 \Rightarrow x^4 + x^2 y^2 + y^2 + 1 = 0$$

2x2 inverse

$$\begin{bmatrix} a & b \\ c & d \end{bmatrix}^{-1} \Rightarrow \frac{1}{ad-bc} \begin{bmatrix} d & -b \\ -c & a \end{bmatrix}$$

Determinant

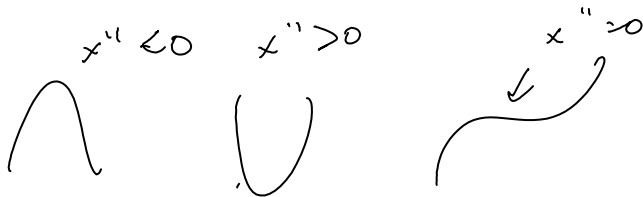
Know this!

$$\text{sum of } 1 \rightarrow N = \frac{n(n+1)}{2}$$

know the sum trick

~~Some vrb~~

Know some useful Maclaurin Series  
(Taylor w/  $a=0$ )



L'Hopital's rule

$$\lim_{x \rightarrow 0} \left( \frac{1 - e^{3x}}{4x} \right) = ? \quad \Rightarrow \quad \lim_{x \rightarrow 0} \frac{-3e^{3x}}{4} \quad \Rightarrow \quad \frac{-3}{4}$$