

this time: large random samples  
next time: Markov chains

extra lecture (webcast)

AMS 131  
4 Jun 19

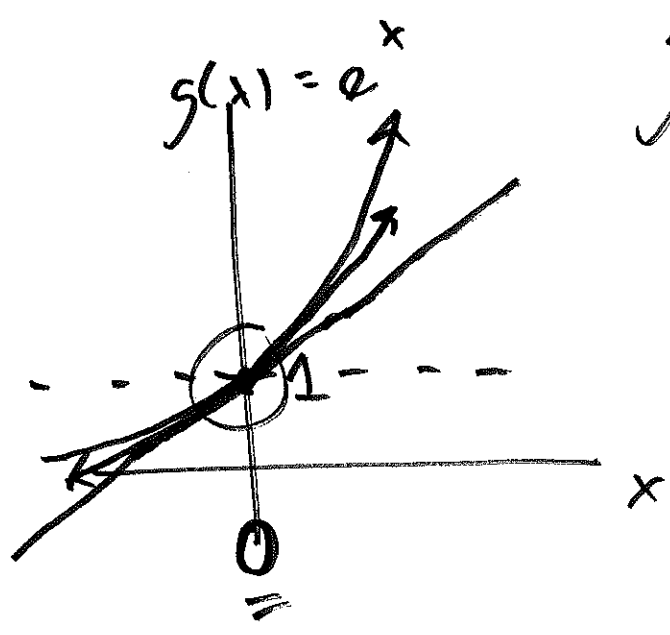
tomorrow evening ①  
(details in later email)

office

DD daily 1.5-hours will start on  
Thu 6 Jun & will continue through  
Sun 16 Jun (details in later email)

expand

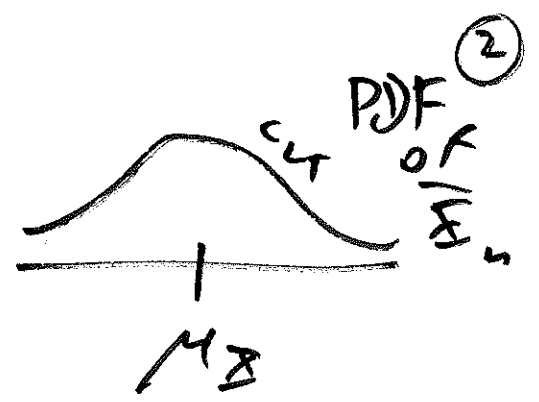
$g(x)$  around  $x = x_0$ :



$$g(x) \doteq g(x_0) + g'(x_0)(x - x_0)$$

$$g(x) \doteq 1$$

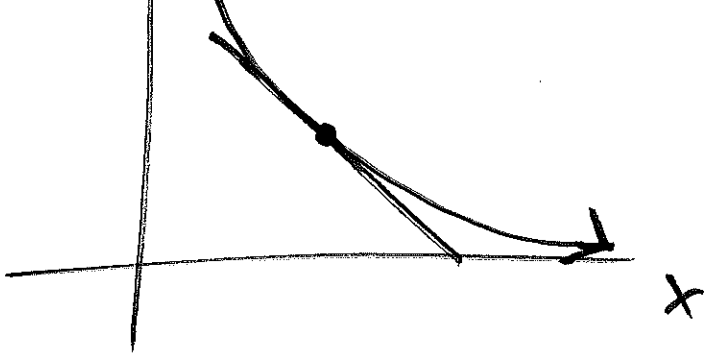
$\bar{X}_n$  has mean  $\mu_X$



expand  $g(\bar{X}_n)$  around  $\mu_X$ :

$$g(\bar{X}_n) = g(\mu_X) + g'(\mu_X)(\bar{X}_n - \mu_X)$$

$$g(x) = \frac{1}{x} = x^{-1} \quad g'(x) = -x^{-2} = -\frac{1}{x^2}$$



$\Delta$ -method  
= propagation  
of error