

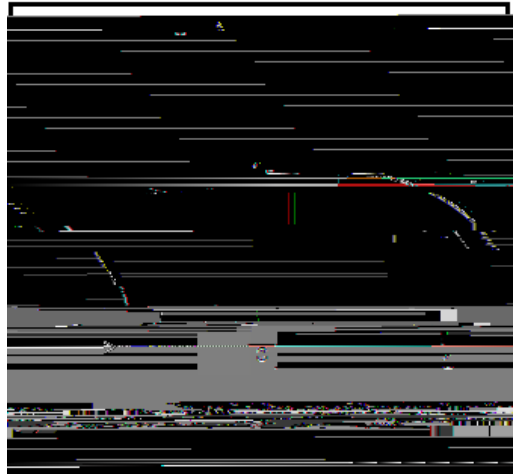




example, in L & M the four independent observations of the trial at which the first success



it would use equation 5.3.4, but it could also use a third input argument as the probability to




```
% 10/29 email from Tom Lane, Mathworks, says that I should call  
% mle using  
  
[Phat,PCI] =mle(X-1,'distribution','geometric');  
format rat;  
fprintf('The maximum likelihood estimate for p is\n')  
disp(Phat)  
format  
fprintf('with 95%% CIs: [%5.3f %5.3f]\n',PCI);  
% Just following along the text's derivation (p. 348) of the MLE:  
syms p; s=diff(5*log(1-p)+4*log(p),p)  
solve(s,p)  
% find the second derivative and plot;  
s2=diff(diff(5*log(1-p)+4*log(p),p))  
% This plot shows that the second derivative is negative for all 0<p<1  
ezplot(s2,[0 1]);figure(gcf);pause  
% From Larsen & Marx (2006) p. 349 provides the MLE formula  
n=length(X);Phat=n/sum(X)
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5.2.1.2 Comment (p. 349) on the distinction between maximum likelihood

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