*5num summary:*min med max q1/q3(med of upper/lower halves) *sample mean=x-bar:* *population mean=μ:* *sample SD=s:* *population SD=*σ:1/N instead of 1/n-1 *prediction for 1 person:***x-bar ± s**, *for all:*μ ± σ *Pr(E∩F)=*Pr(E)\*Pr(F) *P(A∩B)=*P(A)\*P(B|A) *Pr(AUB)=*P(A)+P(B)-P(A∩B) *Pr(E|F)=Pr(E|F’)=independent;***Pr(E|F)=Pr(E),** *(E∩F)=0 means exclusive;*Pr(E|F)=0 *Bayes:*choice AB with branches CD and EF Pr(C)=C/C+E *sketch cdf* is step function defined by piecewise f(n), need relative frequency for histogram, *µ(cdf problem)=***E(X)=∑xf(x), then E(X2)=∑x2f(x),** *σ2=*Var(x)=E(X2)-[E(X)]2 *z-score=*, calc normalcdf(z,µ) *Poisson*:**µ=E(Y)=λ=nπ=∑yf(y),**E(Y2)=λ2-λ, **σ2=Var(Y)=λ,** fK(k)= **fY(k)=** joint probability:Pr(Y=y|X=x)= ***P3iv:.35/.8*** P5b:.32, P5c:.38, P5d:89.9% joint independence:**discrete=Pr(X=x & Y=y)=Pr(X=x) \* Pr(Y=y).** *random=*fXY(x,y)=fX(x)fY(y) *µjoint=E(joint)=*∑x(∑y [g(x,y)f(x,y)]) *Correlation coefficient=Corr(X,Y)=ρXY=E(Zx\*ZY)=**CoVar(X, Y)=σXY=*E[(X-µX)(Y-µY)]=E(XY)=µX µY *Var(X+Y)=***Var(X))+2Cov(X,Y)+Var(Y)** *SD2(X+Y)=*SD2(X)+ SD2(Y) To compute E[(x-2)2]:expand polynomial, break up, sum Sign Test:make H0 and Ha saying one>other, x=non-ties,Pr(X>=x|H0 true)=(π=½), compare to given significance   
***P8(discrete):*** *cdf=*absolute integral *µ=E(X)=*definite integral *E(X2)=*integral(xf(x2) *Var(X)=*E(X2)-[E(X)]2 median:Pr(X<=m)=.5🡪F(m)=.5 two-sided test  
  
  
  
  
  
  
  
  
  
  