Prob86 0.06 X, B.Skg 48.6

B man 80 Vehicles pussing point A man 60 -30% Truins 10% of total stopat the vistoment Track has I pirson Car 3.3.2.1.1 Z = 1/(60)(2+.8(2+))+(80)(.3+.7.2+)) = [28.56] $E\left[\mathcal{X} \right] = 1$

 $-14+6.7700+3.1200^2+2.0800^3+1.0400$

a) E[T] = TP > Via Var(T) = A) 2 Exponentin Var(T) = A) 1 Exponentin C) E[TIK>K]=E[TKCK|M>K] + E[K>K|K>K]

Problem 8.9

P(E(t)>X) = P(E(t)>x|t=u) fr(a)du T, beforet Betonti (+3°P(E(+))xTI=u) fi(u)du TaGn+ $f(t_2-t) = \int P(t_2-u) \times x + u + t = u \times x + u + u \times x +$ - Je /x-u+t) -/w -/(x+t) SPETNESTISX IT = w) Le du =

Un = max (n uniform r.v.s) Un-124] $P[X; \langle X | U_n = Y] = P[X; \langle X$ - PEX; (x/xcy) - (x) P[X:=x|Un=y]= Sy ocxc)

P[X:=x|Un=y]= Sy ocxc)

any of the rus condulare

beauthione. Problem 6 a) The T; are independent
as each of the intermed is independent
Via independent increments

b) Only identically distributed if $\chi(t) = Constant$ else
there is a dependence on time.

P[T_4t] = 1-e P[T_2(t) = 1-\frac{1}{2} \in \frac{1}{2} \frac{1}{2