ι	$\mathbb{P}(X$	k = k	$\begin{array}{c c} 1 & 2 \\ 1/7 & 1/1 \end{array}$	3 1 3/14	4 2/7	5 2/7																				
(a) E[1	κ] = Σ	k-8,000 = 1	1·14+2·1/4	+ 3. %+	- 3 4+ 5 - 3	% = 2+ 2	+9+16+	<u> </u>	<u>.</u> 2	. L																
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	ika	1					= 25	∴ 25																		
						14-	14																			
2.																										
(a) Let's	denote k	es the cost	of tickets un	iil you drow	the first w	a	 → 1	P(x=k)=	₹		(k=1)															
									\$ 10·5		(k=1)															
(b) Since w	ein gerin	the expectat	in da pat	E(X)=,]	k-Auk)				} ह-दे÷	ŧ	(k=3)															
						+ 6 - ફ્રે - ફ્રૅ	-}- } -}		易等量	٠ <u>.</u> <u>۲</u>	(k=4)															
= #									8-4-8	4.5	(k=5)															
(c) Since	the expecte	ad wirmings co	nn be \$8 (w	ming tickect	- cost of	tikket dom	wing	_\	£.¥.₹	·출·七·((K=6)															
the expecto	ed will be E	:[-2*+8] =	Σ (-2 ^k +8) (k(k) = 8+	E. (-18 ¹ -180is);) = t - 31	= <u>055</u>																			
							∴ (85 ∴ 65																			
3.																										
m) E[ax+	6] = ∑ (d	k+6) p _k ac) =	a. Σk-Bak)+	b∑ _R oo =	aE(x)+b																					
co E[(aXi	H - E CAX+L	a)*] = E[(ax+b - aE[x]	-b³]= E[(x-aEDO)	3= a *EC	(x-ecxoy	ני																		
၈ EL(X÷	ECX273,	let's devote	EDC) es ju, t	[(x-µ1^]	= E[x²	2µX+µ*]:	= E0x;3 -	-2ja - EDX34	µr̂= E0x	*3 - 2EC	(x)²+ E(X	1°= E[x*:	- EW)*													
GD ECX+1	r], let po	x.ys = PCX=	a,t=g) the	we know	Prov = Po	t=4)= <u>₹</u> = (k=3	P(sky) and	Roy = X	PCSLY).	Then EC	[x+q]= :	Σ (1tg)Pc4y) =	<u> </u>	cardo + d·bs	uy) = }	- 4.p.co	+ <u>∑</u> y.R	y) = El	X)+E(+3						
4.		(o t	<1																							
F _X (t)	$) := \mathbb{P}[X \le t]$	$[1] = \begin{cases} 1/4 & 1 \\ 1/3 & 2 \\ 1/2 & 5 \end{cases}$	$\leq t < 2$ $\leq t < 5$ $\leq t < 100$																							
		(1 t	≥ 100																							
					Laugew Ad	rishle and 1	then P(X=*	i) equals f	he magnitu	ade of the	jump of 1	at 1.														
The	n p _k (k)=	PCX=k)=	{t (k=1)																						
			7 (K= K	0)																						
5. F _v (t):	- P[Y < t] -	$\int_{t^2-3}^{0} t$	< √3																							
- A(v) .	-6-24	li t	≥ 2		probability	distribution	function																			
				/																						
(a) PEX:	=19] = P	[x≤19]-	P[x<(A]=	Sin for a	H = 0	er PEx	=(A] =	F ₂ (1.9) - {	lm Fices	= (19)*	-9 -(I.A)	+3=0.														
(b) PEIS	x≤19] = F	CL(X713	= P[x≤193	-P[x≤1]=	Fg(1.9) - Fg	(n= 19 <u>1</u> -3	0 = 0.6	ы						D t<		, o t	ds or t	22								
(b) PEIS	x≤19] = F	CL(X713		-P[x≤1]=	Fg(1.9) - Fg	(n= 19 <u>1</u> -3	0 = 0.6	ы					'en = {	0 t<5	i t (2	{ ° * { 2t	<b or="" t<="" td=""><td>22</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td>	22								
(b) PEIS	x≤19] = F	CL(X713	= P[x≤193	-P[x≤1]=	Fg(1.9) - Fg	(n= 19 <u>1</u> -3	0 = 0.6	ы					(de) = {	0 t<.5 2t 55 st 0 t2	t<2 =	}		22								
	(b) E[h 2. (a) Let'c And let 1 (b) Since s = 1 · S + (c) Since the expect the expect (c) Since The Fx(t) Fx(t) Fx(t)	(a) $E[X] = \sum_{k=1}^{\infty} (k)$ $E[X-2k] = \sum_{k=1}^{\infty} (k)$ $E[X-2k] = \sum_{k=1}^{\infty} (k)$ $E[X-2k] = \sum_{k=1}^{\infty} (k)$ Since which is $E[X-2k] = \sum_{k=1}^{\infty} (k)$ Since the expected will be $E[X-2k] = \sum_{k=1}^{\infty} (k)$ $E[X+2k] = \sum_{k=1}^{\infty} (k)$ $E[X+2k] = \sum_{k=1}^{\infty} (k)$ $E[X+2k]$, let positive $E[X+2k]$, let positive $E[X+2k]$, let positive $E[X+2k]$, let positive $E[X+2k]$.	(a) $E[x] = \sum_{k=1}^{\infty} k \cdot k \cdot k \cdot k \cdot k$ (b) $E[[x-21]] = \sum_{k=1}^{\infty} [k-2k] p \cdot c$ 2. (a) Let's denote it as the cost And let $k \cdot k \cdot k$ whose $A \in E_1 \cdot x$, (b) Since the diperted wholey $a \cdot c \cdot k \cdot c$, (c) Since the diperted wholey $a \cdot c \cdot k \cdot c$, (d) Since the diperted wholey $a \cdot c \cdot k \cdot c$, (e) Since the diperted wholey $a \cdot c \cdot c$, (f) $a \cdot c \cdot c \cdot c \cdot c \cdot c$, (g) $a \cdot c \cdot c \cdot c \cdot c \cdot c$, (h) Since the diperted wholey $a \cdot c \cdot c \cdot c$, (o) $a \cdot c \cdot c \cdot c \cdot c \cdot c \cdot c$, (o) $a \cdot c \cdot c \cdot c \cdot c \cdot c \cdot c$, (o) $a \cdot c \cdot c \cdot c \cdot c \cdot c \cdot c \cdot c$, (o) $a \cdot c \cdot c$, (o) $a \cdot c \cdot c$, (o) $a \cdot c \cdot $	(a) $E[X] = \sum_{k=0}^{\infty} k \cdot R(k) = 1 \cdot \ln_1 + 2 \cdot \ln_1 + $	(a) $E[X] = \sum_{k=1}^{N} k \cdot R(k) = 1 \cdot k_1 + 2 \cdot k_2 + 3 \cdot k_3 + 1$ (b) $E[(N-2)] = \sum_{k=1}^{N} [k-2] p_k(k) = R(1) + 0 + p_k(k) + 2 \cdot k_3 + 1$ $= [k_1 + \frac{1}{16} q_k + 2 \cdot \frac{1}{14} + 1]$ 2. 2. (a) Let's denote k as the cost of tides suntil you down And let $k = A$ where $A \in \Sigma_1, 2, 3, 4, 7, 7 + 1$ (b) Since here getting the expectation of $a_1 p_1, f_1 = E(X) = \frac{1}{16}$ $= 1 \cdot \sum_{k=1}^{N} + 2 \cdot \sum_{k=1}^{N} \frac{1}{2} + 2 \cdot \sum$	(a) $E[X] = \sum_{k=1}^{\infty} k \cdot R(k) = 1 \cdot \ln_k + 2 \cdot \ln_k + 2 \cdot \ln_k + 4 \cdot \ln_k + 6 \cdot 1 \cdot \ln_k + 6 \cdot 1 \cdot \ln_k + 2 \cdot \ln_k + 2 \cdot \ln_k + 4 \cdot 1 \cdot \ln_k + 2 \cdot 1 \cdot$	(b) $E[(x-21)] = \sum_{k=1}^{n} [k-2k] p_k(k) = R(1) + 0 + p_k(n) + 2p_k(n) + 2p_k(n) + 2p_k(n)$ $= (a_1 + b_{11} + 2 + 2 + 2p_k(n) + 2p_k(n) + 2p_k(n) + 2p_k(n) + 2p_k(n)$ $= (a_1 + b_{11} + 2 + 2p_k(n) + 2p_k(n) + 2p_k(n) + 2p_k(n) + 2p_k(n)$ $= (a_1 + b_{11} + 2 + 2p_k(n) + 2p_k(n) + 2p_k(n) + 2p_k(n) + 2p_k(n)$ $= (a_1 + b_{11} + 2 + 2p_k(n) $	(a) $E[X] = \sum_{k=0}^{\infty} k \cdot R(ks) = 1 \cdot \ln_k + 2 \cdot \ln_k + 3 \cdot \ln_k + 4 \cdot \ln_k + 6 \cdot 3n = \frac{2k+1+1+1k+1}{1+k}$ (b) $E[[K-21]] = \sum_{k=0}^{\infty} [k-2k] p_k(ks) = R(1) + 0 + p_k(s) + 2p_k(s) + 3p_k(s)$ $= [h] + \frac{3}{4}h + 2 \cdot 3n + 2 \cdot \frac{1}{4} = \frac{2+2+2+12}{14} = \frac{2n}{14}$ 2. (a) Let's denote it as the cost of stocks until use does the first son. (b) Since note gesting the expectation of a p_knt, $E[C] = \sum_{k=0}^{\infty} k \cdot p_k(s)$ $= 1 \cdot \sum_{k=0}^{\infty} k \cdot 2 \cdot \frac{1}{4} \cdot 3 \cdot \frac{1}{4} \cdot \frac{1}{4}$	(a) $E[X] = \sum_{k=1}^{\infty} k \cdot R(k) = 1 \cdot \ln_1 + 2 \cdot \ln_1 + 2 \cdot \ln_1 + 4 \cdot \ln_1 + $	(a) E[[x] = \(\sum_{\text{lens}} \sum_{\text{lens}	(a) E[[x]] = \(\sum_{\text{lens}} \sum_{lens	(a) E[[x] = \(\begin{array}{c} a	(a) E[X] = \(\bar{\text{L}} \) \(\bar{\text{R}} \) \(\bar{\text{R}} \) \(\bar{\text{L}} \	(a) E[(x-1] = \(\frac{\	(a) $E[X] = \sum_{k=1}^{\infty} k \cdot R(k) = 1 \cdot k_1 + 2 \cdot k_2 + 3 \cdot k_3 + 2 \cdot k_4 + 5 \cdot k_4 = 12 + 2 + 12 + 12 + 12 + 12 + 12 + 12 + $	(a) E[x=1] = \(\sum_{\text{in}} \) = \(\text{in} \) = 2 \(\text	(2) E[[x=1] = \(\bar{\frac{1}{2}} \bar{\frac{1}	(a) E(x) = \(\frac{1}{2} \) \(\frac{1} \) \(\frac{1}{2} \) \(\frac{1}{2} \) \(\frac{1}{2} \) \(\	(a) E(x) = \(\frac{1}{2} \) \(\frac{1} \) \(\frac{1}{2} \) \(\frac{1}{2} \) \(\frac{1}{2} \) \(\	Co E[s] = 元 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	(a) E[x] \(\frac{1}{2} \) \(\	0.5 E[K] = \(\frac{1}{2} \) \(\frac{1} \) \(\frac{1}{2} \) \(\frac{1}{2} \) \(\frac{1}{2} \) \(\	(a) E [(5)] = \$\frac{1}{2} \times [Notes] = 1. \text{[Notes] = 2. \text{[Notes] = 2	(S) E(S) = 는 No. = 1 ho 2 ho 3 ho 3 ho 4 ho 4 ho 4 ho 4 ho 4 ho 4	(a) E(s) = \$\frac{1}{2} in the size is a size in the size i	(2) E(x) = \(\frac{1}{2} \) \(\frac{1} \) \(\frac{1}{2} \) \(\frac{1}{2} \) \(\frac{1}{2} \) \(\

6. Le	+ Isi.	un be	the in	dicutor	-dati	ianale in	odvina ij	i and K	with hav	ina an ed	ae with e	ach other	r. Thus	Isa	k1 = S	1	, ij,k	farm A	tringle				
Then 6	EE Estilo	a]= P	(Esiá	nk3 =1)) · I + F	(Esi,j,ki	ۍ د o · (ه=ر	= (₹),	for all 8	ing an ed ∶ij,k}<[1	i] when	e î‡jan	d jek ood	i + k.	1	-0,	other		0				
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