0

No.

Section 5: Ex ?: a) $\int_{-\infty}^{\infty} \int_{-\infty}^{\infty} k(x^2y^2) dx dy = 1$, then: $k \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} x^2 dx dy + k \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} y^2 dx dy = 1$ then: $ ok \int_{-\infty}^{\infty} x^2 dx + ok \int_{-\infty}^{\infty} y^2 dy = 1$ then: $2ok \cdot \frac{17^{-0}}{3} = 1$ $k = \frac{3}{30000}$ b) $P(X \in \mathbb{Z}_{0}^{0}) = \int_{-\infty}^{\infty} \int_{-\infty}^{\infty} k(x^2y^2) dx dy = k \int_{-\infty}^{\infty} (x^2y^2 + \frac{3}{3}) \int_{-\infty}^{\infty} dx$ $= k \int_{-\infty}^{\infty} (x^2y^2 + \frac{3}{3}) \int_{-\infty}^{\infty} dx$ $= k (3 \cdot 8^{-0}) + k (3 \cdot 8^{-0}) + k (3 \cdot 8^{-0}) dx$ $= k (3 \cdot 8^{-0}) + k (3 \cdot 8^{-0}) + k (3 \cdot 8^{-0}) dx$ $= k (3 \cdot 8^{-0}) + k (3 \cdot 8$	wwv	Chapter 5.
Ex 9. a) $\int_{2}^{2} \int_{3}^{2} k u^{2} y^{2} du dy = 1$, then: $k \int_{3}^{2} \int_{3}^{2} x^{2} du dy + k \int_{3}^{2} \int_{3}^{2} y^{2} du dy = 1$ then $2 \circ k \circ \frac{(2^{2} - 2^{2} - 1)}{3} = 1$ $k = \frac{3}{300000}$ b) $P(X = 2b \text{ and } Y < 2b) = \int_{20}^{2} \int_{3}^{2} k u^{2} y^{2} du dy = k \int_{3}^{2} \int_{3}^{2} (k^{2} y + \frac{3}{2}) du du = k \int_{3}^{2} \int_{3}^{2} (k^{2} y + \frac{3}{2}) du du du = k \int_{3}^{2} \int_{3}^{2} (k^{2} y + \frac{3}{2}) du du du du du du du d$	6	
a) $\int_{3}^{3} \int_{0}^{10} k x^{2} y^{2} dx dy = 1$, then: $k \int_{0}^{10} \int_{0}^{10} x^{2} dx + k \int_{0}^{10} \int_{0}^{10} y^{2} dy = 1$ then $20 k = \frac{10^{100}}{3} = 1$ $k = \frac{3}{380000}$ b) $P(Xe2b \text{ and } Y < 2b) = \int_{2}^{2} \int_{10}^{2} k x^{2} y^{2} dx + 10 k \int_{0}^{20} y^{2} dy = 1$ $k = \frac{3}{380000}$ $k = \frac{10^{20}}{38000} \int_{0}^{10} y^{2} dx$ $= k \int_{0}^{20} \left(k x^{2} + 3 \right) \frac{1}{2} y^{2} dx$ $= k \int_{0}^{20} \left(k x^{2} + 3 \right) \frac{1}{2} y^{2} dx$ $= k \int_{0}^{20} \left(k x^{2} + 3 \right) \frac{1}{2} y^{2} dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx - \int_{0}^{2} \left(\frac{x^{2}}{2} + 10 dy dx \right) dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx - \int_{0}^{2} \left(\frac{x^{2}}{2} + 10 dy dx \right) dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx - \int_{0}^{2} \left(\frac{x^{2}}{2} + 10 dy dx \right) dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx - \int_{0}^{2} \left(\frac{x^{2}}{2} + 10 dy dx \right) dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx + 10 dy dx + 10 dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx + 10 dy dx + 10 dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx + 10 dy dx + 10 dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx + 10 dy dx + 10 dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx + 10 dy dx + 10 dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx + 10 dy dx + 10 dy dx + 10 dy dx$ $= 0.359 \int_{0}^{2} x^{2} dx + 10 dy dx + 1$	7	
then: $ 0 k 3^{3} k^{3} dx + 10 k 5^{3} k^{3} dy = 1$ then $20 k \cdot \frac{17^{3}}{3} = 1$ $k = \frac{3}{380000}$ $k = \frac{3}{3800000}$ $k = \frac{3}{380000000000000000000000000000000000$		
then $20 \times \frac{1}{3} = \frac{1}{380000}$ b) $P(X \ge 2b \text{ and } Y < 2b) = \begin{bmatrix} 2b & 2b$		then: $10 \text{K} \left(\frac{3^{\circ}}{2^{\circ}} \right)^{2} dx + 10 \text{K} \left(\frac{3^{\circ}}{2^{\circ}} \right)^{2} dy = 1$
$k = \frac{3}{380000}$ b) $P(X=2b)$ and $Y<2b) = \int_{2^{1}}^{2^{1}} \int_{10}^{2} k(x^{2}+y^{2}) dx dy = k \int_{20}^{20} \left(\frac{6x^{2}+3}{19} \right)^{2} dx$ $= k \int_{20}^{20} \left(6x$	0	then $20 \text{k} \times \frac{1900}{3} = 1$
b) $P(X=2b \text{ and } Y<2b) = \int_{2^{2}}^{2^{2}} \int_{2^{0}}^{2^{0}} k (x^{2}+y^{2}) dx dy = k \int_{2^{0}}^{2^{0}} (bx^{2}+3) f^{2}) dx$ $= k \int_{2^{0}}^{2^{0}} (bx^{2}+3) f^{2}) dx$ $= k (3^{8}f_{0}+y) = 0.30x^{4}$ c) $P(1X-Y) \le 2 = 1 - \int_{2^{0}}^{2^{0}} \int_{X^{0}}^{X^{0}} f^{1}(x^{0}) dy dx - \int_{2^{0}}^{3^{0}} \int_{2^{\infty}}^{X^{0}} f^{1}(x^{0}) dy dx$ $= 0.35 f_{3}^{2}$ d) $f_{X}(x) = \int_{2^{0}}^{3^{0}} k (x^{2}+y^{2}) dy = 10 k x^{2} + 0.05$ ($20 \le x \le 30$) e) $f(x,y) \ne f_{X}(x) \cdot f_{Y}(y)$, so X_{1}, Y_{1} are not independent. $E(x) = \int_{2^{0}}^{3^{0}} k (x^{2}+y^{2}) dy = \int_{2^{0}}^{3^{0}} e^{-x} dx = 0.05$ b) $f_{X}(x) = \int_{2^{0}}^{3^{0}} x e^{-x} e^{-x} dx = \int_{1}^{3^{0}} e^{-x} dx = 0.05$ b) $f_{X}(x) = \int_{2^{0}}^{3^{0}} x e^{-x} e^{-x} dx = \int_{1}^{3^{0}} e^{-x} dx = \int_{1}^{3^{0}} f^{1}(x^{0}) e^{-x} dx = \int_{1}^{3^{0}} f^{1}($	7	3
$= k \frac{120}{120} (6x^2 + 3i 9) dx$ $= k (38404) = 0.3641$ $= 0.3543$ $d) f_{X}(x) = \int_{20}^{30} (x^2 + 1x^2) dy dx - \int_{20}^{30} (x^2 + 1x^2) dy dx$ $= 0.3543$ $d) f_{X}(x) = \int_{20}^{30} (x^2 + 1x^2) dy = 10 k^2 + 0.05 (20 \le x \le 30)$ $e) f_{X}(x) = \int_{1}^{30} (x + 1x^2) dy = 10 k^2 + 0.05 (20 \le x \le 30)$ $e) f_{X}(x) = \int_{1}^{30} (x + 1x^2) dy = 10 k^2 + 0.05 (20 \le x \le 30)$ $Ex. 2$ $a) p_{X}(x) = \int_{1}^{30} x e^{-x(1+y)} dy dx = \int_{3}^{30} e^{-x} dx = 0.05$ $f_{X}(x) = \int_{0}^{30} x e^{-x(1+y)} dy = e^{x} (x > 10)$ $f_{X}(x) = \int_{0}^{30} x e^{-x(1+y)} dx = (1+y)^{2} (y > 10)$ $f_{X}(x) = \int_{0}^{30} x e^{-x(1+y)} dx = (1+y)^{2} (y > 10)$ $f_{X}(x) = \int_{0}^{30} x e^{-x(1+y)} dx = 1 - \int_{0}^{30} \int_{0}^{30} x e^{-x(1+y)} dy dx$ $= 1 - \int_{0}^{3} \int_{0}^{30} x e^{-x(1+y)} dx$ $= 0.3$ $Ex. 8.$ $a) we know that: Pxu = 0.39$: then: $Py_{X}(0 1) = \frac{0.38}{0.39} = 0.2513$ $Py_{X}(1 1) = \frac{0.29}{0.39} = 0.5882$ $Py_{X}(2 1) = \frac{0.29}{0.39} = 0.1765$	0	b) P(X=26 and Y=26) = \(\frac{26}{20} \int \(\text{X} + \text{Y} \) dxdy = \(\left(\frac{26}{20} \left(\text{X} + \text{Y} \) \dx
$c) P(X-Y \le 2) = -\int_{20}^{20} \int_{X/2}^{30} f(X/Y) dy dx - \int_{20}^{30} \int_{x/2}^{x/2} f(X/Y) dy dx$ $= 0.35 f_{3}^{3}$ $d) f_{X}(X) = \int_{20}^{30} K(x^{2} e^{x^{2}}) dy = 0Kx^{2} + 0.05 (20 \le X \le 30)$ $e) f(X/Y) \neq f_{X}(X) \cdot f_{Y}(Y), so X, Y \text{ are not independent.}$ $EX. /2.$ $a) P(X/Z) = \int_{0}^{\infty} Xe^{-X(1+Y)} dy dx = \int_{3}^{\infty} e^{-X} dx = 0.05$ $b) f_{X}(X) = \int_{0}^{\infty} Xe^{-(1+Y)X} dy = e^{-X} (X/Z)0$ $f_{Y}(Y) = \int_{3}^{\infty} Xe^{-(1+Y)X} dx = \frac{1}{ 1+Y ^{2}} (4/Z)0.$ $f_{Y}(Y) = \int_{3}^{\infty} Xe^{-(1+Y)X} dx = \frac{1}{ 1+Y ^{2}} (4/Z)0.$ $f_{Y}(Y) = \int_{3}^{\infty} Xe^{-(1+Y)X} dx = \frac{1}{ 1+Y ^{2}} (4/Z)0.$ $f_{Y}(Y) = \int_{3}^{\infty} Xe^{-(1+Y)X} dx = \frac{1}{ 1-f ^{2}} \int_{3}^{5} Xe^{-(1+Y)X} dy dx$ $= 1 - \int_{0}^{5} \int_{3}^{5} Xe^{-X+1} dy dx$ $= 0.3$ $Ex. /8.$ $a) We know that: Px(1) = 0.34y: then: Py(1) = \frac{0.38}{0.37} = 0.335.$ $P(1)(21) = \frac{0.35}{0.34y} = 0.588.$ $P(1)(21) = \frac{0.35}{0.34y} = 0.5185.$	0	= K (36 (6x2+3192) dx
$d) = \int_{30}^{30} k(x^{2}+y^{2}) dy = [0 kx^{2} + 0.05] (20 \le x \le 30)$ $e) = \int_{30}^{30} k(x^{2}+y^{2}) dy = [0 kx^{2} + 0.05] (20 \le x \le 30)$ $e) = \int_{30}^{30} k(x^{2}+y^{2}) dy = [0 kx^{2} + 0.05] (20 \le x \le 30)$ $Ex. 2.$ $a) P(x,y) = \int_{3}^{30} \int_{0}^{3} x e^{-x(y y)} dy = \int_{3}^{3} e^{-x} dx = 0.05$ $b) = \int_{3}^{3} x(x) = \int_{3}^{30} x e^{-(y y)} dx = \int_{3}^{3} e^{-x} dx = 0.05$ $f(x,y) = \int_{3}^{30} x e^{-(y y)} dx = \int_{3}^{3} e^{-x(y y)} dy = \int_{3}^{3} x e^{-(y y)} dy = \int_{3}^{3} x e^{-(y y)} dy = \int_{3}^{3} x e^{-(y y)} dy = \int_{3}^{3} e^{-x(y y)} dx = \int_{3}^{3} e^{-x(y $		= (38404) = 0-3024
$d) = \int_{30}^{30} k(x^{2}+y^{2}) dy = [0 kx^{2} + 0.05] (20 \le x \le 30)$ $e) = \int_{30}^{30} k(x^{2}+y^{2}) dy = [0 kx^{2} + 0.05] (20 \le x \le 30)$ $e) = \int_{30}^{30} k(x^{2}+y^{2}) dy = [0 kx^{2} + 0.05] (20 \le x \le 30)$ $Ex. 2.$ $a) P(x,y) = \int_{3}^{30} \int_{0}^{3} x e^{-x(y y)} dy = \int_{3}^{3} e^{-x} dx = 0.05$ $b) = \int_{3}^{3} x(x) = \int_{3}^{30} x e^{-(y y)} dx = \int_{3}^{3} e^{-x} dx = 0.05$ $f(x,y) = \int_{3}^{30} x e^{-(y y)} dx = \int_{3}^{3} e^{-x(y y)} dy = \int_{3}^{3} x e^{-(y y)} dy = \int_{3}^{3} x e^{-(y y)} dy = \int_{3}^{3} x e^{-(y y)} dy = \int_{3}^{3} e^{-x(y y)} dx = \int_{3}^{3} e^{-x(y $		c) P(1X-Y1 < 2) = 1- \(\frac{28}{20} \int \frac{30}{x+2} \frac{1}{1} \times \frac{1}{20} \int \frac{1}{2} \frac{1}{22} \int \frac{1}{22}
e) $f(x,y) \neq f(x) \cdot f(y,y)$, so X, Y are not independent. Ex. 12. a) $P(Xz^{2}) = \int_{0}^{z} \int_{0}^{\infty} x e^{-x(1+y)} dy dx = \int_{0}^{z} e^{-x} dx = 0.05$ b) $f(x,y) = \int_{0}^{\infty} x e^{-(1+y)x} dy = e^{-x} (x^{2},0)$ $f(x,y) = \int_{0}^{\infty} x e^{-(1+y)x} dx = \frac{1}{(1+y)^{2}} (y^{2},0)$. $f(x,y) = \int_{0}^{\infty} x e^{-(1+y)x} dx = \frac{1}{(1+y)^{2}} (y^{2},0)$. $f(x,y) \neq f(x^{2}) \cdot f(x^{2},y)$, so x and y are not independent. c) $P(Xz^{2}, y) = P(X \leq 3 \text{ and } Y \leq 3) = 1 - \int_{0}^{z} \int_{0}^{z} x e^{-xy} dy dx$ $= 1 - \int_{0}^{z} \int_{0}^{z} x e^{-xy} dy dx$ $= 1 - \int_{0}^{z} e^{-x} (1 - e^{-xx}) dx$ $= 0.3$ Ex. 18. a) We know that: $P(x) = 0.3y$: then: $P(y)_{x}(0 1) = \frac{0.08}{0.3y} = 0.235$; $P(y)_{x}(1 1) = \frac{0.27}{0.3y} = 0.5882$. $P(y)_{x}(2 1) = \frac{0.27}{0.3y} = 0.1165$	(P	
e) $f(x,y) \neq f(x) \cdot f(y,y)$, so X, Y are not independent. Ex. 12. a) $P(Xz^{2}) = \int_{0}^{z} \int_{0}^{\infty} x e^{-x(1+y)} dy dx = \int_{0}^{z} e^{-x} dx = 0.05$ b) $f(x,y) = \int_{0}^{\infty} x e^{-(1+y)x} dy = e^{-x} (x^{2},0)$ $f(x,y) = \int_{0}^{\infty} x e^{-(1+y)x} dx = \frac{1}{(1+y)^{2}} (y^{2},0)$. $f(x,y) = \int_{0}^{\infty} x e^{-(1+y)x} dx = \frac{1}{(1+y)^{2}} (y^{2},0)$. $f(x,y) \neq f(x^{2}) \cdot f(x^{2},y)$, so x and y are not independent. c) $P(Xz^{2}, y) = P(X \leq 3 \text{ and } Y \leq 3) = 1 - \int_{0}^{z} \int_{0}^{z} x e^{-xy} dy dx$ $= 1 - \int_{0}^{z} \int_{0}^{z} x e^{-xy} dy dx$ $= 1 - \int_{0}^{z} e^{-x} (1 - e^{-xx}) dx$ $= 0.3$ Ex. 18. a) We know that: $P(x) = 0.3y$: then: $P(y)_{x}(0 1) = \frac{0.08}{0.3y} = 0.235$; $P(y)_{x}(1 1) = \frac{0.27}{0.3y} = 0.5882$. $P(y)_{x}(2 1) = \frac{0.27}{0.3y} = 0.1165$		d) $f_X(x) = \int_{20}^{30} k(x^2 + y^2) dy = 10 kx^2 + 0.05 (20 \le x \le 30)$
$Ex. 2.$ a) $P(x73) = \int_{3}^{\infty} \int_{0}^{\infty} x e^{-x(1+4)} dy dx = \int_{3}^{\infty} e^{-x} dx = 0.05$ b) $f_{x(x)} = \int_{0}^{\infty} x e^{-(1+9)x} dy = e^{-x} (x70)$ $f_{y(y)} = \int_{3}^{\infty} x e^{-(1+9)x} dx = \frac{1}{ 1+y ^{2}} (y70)$ $f_{(x)} \neq f_{x}(x) \cdot f_{y}(y), \text{ so } x \text{ and } y \text{ ore not independent.}$ c) $P(x>3 \text{ or } y>3) = [-P(x=3 \text{ and } y = 3) = 1 - \int_{3}^{\infty} \int_{0}^{\infty} x e^{-(1+9)x} dy dx$ $= 1 - \int_{3}^{3} e^{-x} (1 - e^{-x}) dx$ $= 0.3$ Ex. 8. a) We know that: $P(x(1) = 0.39$; then: $P(yx(0 1) = \frac{0.08}{0.39} = 0.735$; $P(y x(1 1) = \frac{0.29}{0.39} = 6.5882$ $P(y x(2 1) = \frac{0.29}{0.39} = 0.176$)	0	
a) $P(X73) = \int_{3}^{\infty} \int_{0}^{\infty} Xe^{-X(1+Y)} dy dX = \int_{3}^{\infty} e^{-X} dX = 0.0T$ b) $f_{X(X)} = \int_{0}^{\infty} Xe^{-(1+Y)X} dy = e^{-X} (X70)$ $f_{Y(Y)} = \int_{3}^{\infty} Xe^{-(1+Y)X} dX = \frac{1}{(1+Y)^{2}} (Y70)$ $f_{(XY)} \neq f_{X(X)} = f_{X(Y)} = f_{X(Y)} = \frac{1}{(1+Y)^{2}} (Y70)$ C) $P(X>3 \text{ or } Y>3) = -P(X\leq3 \text{ and } Y\leq3) = -\int_{3}^{\infty} \int_{0}^{\infty} Xe^{-(1+Y)X} dy dX$ $= -\int_{3}^{3} \int_{0}^{\infty} Xe^{-X} dy dx$ $= -\int_{3}^{3} e^{-X} (1-e^{-3X}) dX$ $= 0.3$ Ex.18. a) We know that: $P_{X(I)} = 0.3y$: then: $P_{Y(X)}(0 I) = \frac{0.08}{0.3Y} = 0.7353$ $P_{Y(X)}(1 I) = \frac{0.27}{0.3Y} = 0.5882$ $P_{Y(X)}(2 I) = \frac{0.34}{0.3Y} = 0.7165$	0	
$f_{Y(Y)} = \int_{3}^{\infty} x e^{-\frac{\pi}{2}x} dx = \frac{1}{1+\frac{\pi}{2}} \frac{1}{2} $	0	EX. /2.
$f_{Y(Y)} = \int_{3}^{\infty} x e^{-\frac{\pi}{2}x} dx = \frac{1}{1+\frac{\pi}{2}} \frac{1}{2} $	0	a) $P(x_{73}) = \int_{3}^{\infty} \int_{0}^{\infty} x e^{-x(1+\eta)} dy dx = \int_{3}^{\infty} e^{-x} dx = 0.05$
$f_{Y(Y)} = \int_{3}^{\infty} x e^{-\frac{\pi}{2}x} dx = \frac{1}{1+\frac{\pi}{2}} \frac{1}{2} $	7	b) $f_{X(X)} = \int_{0}^{\infty} \chi e^{-iTy/X} dy = e^{-\chi} (x70)$
$f(x,y) \neq f(x) \cdot f(y,y), \text{so } x \text{ and } Y \text{ ove not independent.}$ $C) P(X>3 \text{ or } Y>3) = -P(X\leq 3 \text{ and } Y\leq 3) = -\int_0^2 \int_0^2 x e^{-(174)X} dy dx$ $= -\int_0^3 e^{-X} (1-e^{-3X}) dx$ $= \int_0^3 e^{-X} (1-e^{-3X}) dx$ $= $	3	fyiy)= \(\frac{3}{3} \times e^{-(173)/2} dx = \(\frac{1}{170} \)
$= 1 - \int_{0}^{3} \int_{0}^{3} x e^{x} e^{xy} dy dy$ $= 1 - \int_{0}^{3} e^{x} (1 - e^{-3x}) dx$ $= 0.3$ $= 0.3$ $= 0.3$ $= 0.9$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$ $= 0.93$	7	$f(x,y) \neq f(x)$, fixy), so x and Y are not independent.
$= 1 - \int_{3}^{3} e^{x} (1 - e^{-3x}) dx$ $= 0.3$ $= 1 - \int_{3}^{3} e^{x} (1 - e^{-3x}) dx$ $= 0.3$ $= 0.3$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$ $= 0.9$	0	
	0	
$0 Ex.18.$ $0 a) We know that: Px(1) = 0.3\psi: then: Py(0 1) = \frac{0.08}{0.3\psi} = 0.7353$ $0 Pu(x(1 1) = \frac{0.2\psi}{0.3\psi} = 6.5882$ $0 Py(x(2 1) = \frac{0.04}{0.3\psi} = 0.7165$	0	$= 1 - \int_{0}^{3} e^{x} (1 - e^{-3x}) dx$
(a) We know that: $P_{X(1)} = 0.39$: then: $P_{Y X}(0 1) = \frac{0.08}{0.37} = 0.7353$ (b) $P_{Y X}(1 1) = \frac{0.20}{0.39} = 6.5882$ (c) $P_{Y X}(2 1) = \frac{0.06}{0.39} = 0.1765$	0	= b·3.
(a) We know that: $P_{X(1)} = 0.39$: then: $P_{Y X}(0 1) = \frac{0.08}{0.37} = 0.7353$ (b) $P_{Y X}(1 1) = \frac{0.20}{0.39} = 6.5882$ (c) $P_{Y X}(2 1) = \frac{0.06}{0.39} = 0.1765$	0	
$P_{0} x(111) = \frac{0.20}{0.34} = 6.5882.$ $P_{0} x(211) = \frac{0.20}{0.34} = 0.1765$	0	
$P_{0} x(111) = \frac{0.20}{0.34} = 6.5882.$ $P_{0} x(211) = \frac{0.20}{0.34} = 0.1765$	0	a) we know that: Px(1)=0-34: then: Pyx(0 1)= 0-2353
	0	PHX(111) = 0.50 = 6.5882
	0	PYIX (211) = 0.06 = 0.1765
	0	
	0	

KOKUYU



12	0.28	0.60
	12	12 0.78

Ex.19.

a)
$$f_{X|X(Y|X)} = \frac{f_{(X,Y)}}{f_{X(X)}} = \frac{f_{(X,Y)}}{f_{(X,Y)}} =$$

c)
$$E(Y|X=22) = \int_{20}^{20} y \cdot \frac{E(22^2+y^2)}{\mu E(22^2+y^2)} dy = >5.372912$$

 $E(Y^2|X=22) = \int_{20}^{20} y^2 \cdot \frac{E(22^2+y^2)}{\mu E(22^2+y^2)} dy = 652.02864$
 $V(Y|X=22) = E(Y^2|X=22) - E(Y|X=22)^2 = 8.243976$
 $\sigma = \sqrt{V(Y|X=22)} = 2.87$





Section S.Z					y .			
Ex.24:	hux.y)	1	2	3	4	5_	<u> </u>	
we can draw a table:	!	-	2	3	4	3	2	every p(xm)= 3
	2	2	_	2	3	4	3	
χ.	3	3	2	-	2	3	4	
	4	4	3	2	-	2	3.	
	5	3	4	3	2	•	2	
	6	2	3	4	3	2	-	
So: E(h(x/Y)) = \sum_x h(x/4)	PLX) =	84	- - 2	8			
L (MAN) X Y			20					
Ex-26.	•							
revenue = 3x + 10 Y, so E	[Youan	1101	- F	ıλΥ	+10	Y)		
1 e volice - 95+10 1, 30 L.	Cleren	n6)	= 5	212	X+10	4). D	. Υ.W.) =	15.4\$
	•		X=	4=0		4) [-	(My)	10-19
EX-33						•		
E(XY) = E(X)·E(Y), COV(X,Y)= FIX	Y)-	Fix	·EL	Y)=	0	•	
So: Corr (X, Y) = Cov(X, Y) = TXTY =	^	-1/			.17			
50: WALLAIT - EXEY -								
r 20		-,				-		
EV 21.			7	<i>-</i> .) 4 5	V	
Ex. 3J.	Y+1 1 CF	Y	11 -					
a) Cov(oxtb, cYtd) = EZca			_					
a) Cor(oxtb, cYtd) = EZ(a) = E(a)	XY+a	dx+	bcY	+ 6	d)-	EEL	x)r.b)(cEcritd)]
a) Cor(oxtb, cYtd) = EZ(a) = E(a)	XY+a	dx+	bcY	+ b Y)=	d)- ac	EL)	×)+.b)(:Y)-E	cEcYI+d)] (X)EcY)
a) Cov(oxtb,cYtd) = EZca = E(ac = acE(XY+a XY) -a	dx+ acEu	bcY x)Ei	+ b Y)= =	d)- ac	EEL)	×)+.b)(:Y) - E ! X, Y)	cEcYI+d)] (X)EcY)
a) Cov(axtb, cYtd) = EZ(a) = E(a) = acE(b). Corr (axtb, cYtd) = Cov(a) = SD(a	XY+ a XY) - a ctb, cYt X+b) SD(dxtacEc	bcY x)El	+ b Y) = = ac (ac)	ac ac Cor	EEC COV COV	×h.b)(:Y) - E (X, Y) Y)	cE(Y)*d)] (X)E(Y)
a) Cov(axtb, cYtd) = EZ(a) = E(a)	XY+ a XY) - a ctb, cYt X+b) SD(dxtacEc	bcY x)El	+ b Y) = = ac (ac)	ac ac Cor	EEC COV COV	×h.b)(:Y) - E (X, Y) Y)	cE(Y) *d)] (X)E(Y)

