		AL ALL	A III EVE	+1197	Tre	Third	barre.	MAJ	chisen	. lef	B	be th
erent .	that a	ball is	taken	from	the	chosen	barrel	uniformly	af	random	and	the
ball is	red.						W. 122	n viet		1		
Pr (A	18) =	Pr (An	3)									
la des	de els	$\frac{1}{3} \times \frac{2}{5}$	de la			2.5	W.	(1) N 3]		X		
		1 + 1 +	25				Y	h with	, lo : lo	Hadas		
		2			e e			16.12				
1	nonf all iv Pr (A	rent that a all is red. Pr (AIB) =	rent that a ball is all is red. Pr (AIB) = $\frac{1}{3} \times \frac{2}{5}$ $\frac{1}{6} + \frac{1}{6} + \frac{2}{6}$	rent that a ball is taken all is red. $Pr(A B) = \frac{Pr(A \cap B)}{Ir(B)}$ $= \frac{1}{3} \times \frac{2}{5}$ $= \frac{1}{5} + \frac{1}{5} + \frac{2}{5}$ $= \frac{2}{5}$	rent that a ball is taken from all is red. Pr (A1B) = $\frac{Pr(AnB)}{Ir(B)}$ = $\frac{1}{3} \times \frac{2}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{2}{5}$ 2	rent that a ball is taken from the sall is red. Pr (A1B) = $\frac{Pr(A \cap B)}{Ir(B)}$ = $\frac{1}{3} \times \frac{2}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{2}{5}$	went that a ball is taken from the chosen all is red. Pr (A1B) = $\frac{Pr(AnB)}{Ir(B)}$ = $\frac{1}{3} \times \frac{2}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{2}{5}$	rent that a ball is taken from the chosen barrel all is red. Pr (A1B) = $\frac{Pr(AnB)}{Ir(B)}$ = $\frac{1}{3} \times \frac{2}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{2}{5}$	went that a ball is taken from the chosen barrel uniformly all is red. Pr (A1B) = $\frac{Pr(A \cap B)}{Ir(B)}$ = $\frac{1}{3} \times \frac{2}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{2}{5}$	went that a ball is taken from the chosen barrel uniformly at all is red. Pr (A1B) = $\frac{Pr(A \cap B)}{Ir(B)}$ = $\frac{1}{3} \times \frac{2}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{2}{5}$	went that a ball is taken from the chosen barrel uniformly at random all is red. Pr (A1B) = $\frac{Pr(AnB)}{Pr(B)}$ = $\frac{1}{3} \times \frac{2}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{2}{5}$	Let A be the probability that the third barrel was chosen let B want that a ball is taken from the chosen barrel uniformly at random and will is red. Pr (A1B) = $\frac{Pr(AnB)}{Ir(B)}$ = $\frac{1}{3} \times \frac{2}{5}$ $\frac{1}{5} + \frac{1}{5} + \frac{2}{5}$

ii)
$$\frac{1}{4} \times (-1-1)^2 + \frac{1}{8} \times (-1)^2 + \frac{5}{8} \times (2-1)^2 = \frac{7}{4}$$

21)

$$\frac{\Pr(XY = 4)}{= \Pr(X = 2 \land Y = -2)} = \frac{5}{36}$$

$$\frac{S}{8} \left(\frac{1}{2}\right) = \frac{3}{36}$$

$$\frac{P_{r}(XY = -1)}{= \Pr(X = -1 \land Y = 1)}$$

$$= \left(\frac{1}{4}\right) \left(\frac{1}{2}\right) = \frac{1}{12}$$

$$\frac{P_{r}(XY = 0)}{= \Pr(X = -1 \land Y = 0)} + \Pr(X = 0 \land Y = -2) + \Pr(X = 0 \land Y = 0)$$

$$+ \Pr(X = 0 \land Y = 1) + \Pr(X = 2 \land Y = 0)$$

$$= \left(\frac{1}{4}\right) \left(\frac{1}{6}\right) + \left(\frac{1}{8}\right) \left(\frac{1}{2}\right) + \left(\frac{1}{3}\right) \left(\frac{1}{6}\right) + \left(\frac{1}{3}\right) \left(\frac{1}{1}\right) + \left(\frac{5}{8}\right) \left(\frac{1}{1}\right)$$

$$\frac{13}{188}$$

$$\Pr(XY = 2) = \Pr(X = -1 \land Y = -2) + \Pr(X = 2 \land Y = 1)$$

$$= \left(\frac{1}{4}\right) \left(\frac{1}{2}\right) + \left(\frac{5}{8}\right) \left(\frac{1}{2}\right)$$

NO	DATE:
31)	Pr(X=0) = 1/6 Pr(Y=0) = 1/6 Pr(X=0 nY=0) = 36
W. L	:. Pr(X=0 n Y=0) = Pr(X=0) Pr(Y=0), so. the event "X=0" and
	Y=0" are independent.
	· (81A)
(ii	X can take values in $\{-5, -4, -3, -2, -1, 0\}$ (each with probability $\frac{1}{5}$)
	Probability distribution of Y is
	y -5 -4 -3 -2 -1 0 1 2 3 4 5
	$P_{r}(Y=y)$ $\frac{1}{36}$ $\frac{2}{76}$ $\frac{3}{16}$ $\frac{4}{36}$ $\frac{5}{76}$ $\frac{4}{36}$ $\frac{3}{26}$ $\frac{2}{36}$ $\frac{1}{36}$ $\frac{2}{31}$ $\frac{1}{21}$
	Pr (X=-4 / Y=4)=0
Marie	Pr (X=-4) Pr(Y=4) = 108
	So Pr (X=-4 1 Y= 4) & Pr (X=-4) Pr (Y=4) and X and Y are not
	in de pen dent.
Augel of	
iii)	Pr (X \ -2 Y > 1) = Pr (X \ \ -2 \ \ Y \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
	Pr (Y) 1
	= 36 2
	$= \frac{36}{36}$ $\frac{15}{36}$ $\frac{5}{36}$
	Event $(X \leq -2 \land Y)$ can take values in $\{(-4,5), (-3,4), (-3,5), (-3$
	(-2,3),(-2,4),(-2,5)}
	Probability distribution of Y is
	1 2 3 4 5
	$r(Y=y) = \frac{5}{26} = \frac{4}{36} = \frac{1}{36} = \frac{1}{36}$
	7 / 26 36 36 36
7.1	
	P (x + = 2)