Extrose #7  A B C  P(n) = 0.5 wrong size, $P(\omega 1)$ 3/6 1/3 3/6 $P(0) = 0.3$ delects, $P(\alpha 1)$ 3/0 3/9 1/4 $P(C) = 0.2$ change mad, $P(\alpha 1)$ 3/0 3/9  i) find $P(A \mid m) = P(m \mid n) P(n)$ $P(m \mid n) P(n) + P(m \mid n) P(n) + P(m \mid c) P(c)$ $P(m \mid n) P(n) + P(m \mid n) P(n) + P(m \mid c) P(c)$ $P(m \mid n) P(n) + P(m \mid n) P(n) + P(m \mid c) P(c)$ $P(m \mid n) P(n) + P(m \mid n) P(n) + P(m \mid c) P(n) P(n)$ $P(m \mid n) P(n) + P(n) P(n) P(n) P(n)$ $P(m \mid n) P(n) + P(n) P(n) P(n) P(n)$ $P(m \mid n) P(n) + P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n) P(n)$ $P(n) P(n) P(n)$		No:	ate:
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$\begin{array}{cccccccccccccccccccccccccccccccccccc$	-		
$\begin{array}{cccccccccccccccccccccccccccccccccccc$		Exercise #7	
$P(B) = 0.5 \qquad \text{wrong size, } P(w1) \qquad \frac{3}{5} \qquad \frac{9}{16}$ $P(B) = 0.3 \qquad \text{defects, } P(d1) \qquad \frac{1}{10} \qquad \frac{1}{14}$ $P(C) = 0.2 \qquad \text{change mind, } P(m1) \qquad \frac{1}{10} \qquad \frac{1}{10} \qquad \frac{3}{16}$ $P(m1) = \qquad P(m1) P(B)$ $P(m1) P(B) + P(m1) P(B) + P(m1) P(C)$ $= \qquad \frac{3}{10} (0.5)$ $\frac{3}{10} (0.5) + \frac{3}{10} (0.5) + \frac{3}{10} (0.5)$ $= 0.545$ $P(w1) P(B) + P(w1) P(C)$ $= \qquad \frac{3}{10} (0.2)$ $\frac{3}{10} (0.2)$ $\frac{3}{10} (0.2) + \frac{3}{10} (0.2)$ $= 0.158$ $P(d1) P(B) P(B) + P(d1) P(C)$ $= \qquad \frac{3}{10} P(B) P(B) + P(d1) P(C)$ $= \qquad \frac{3}{10} P(B) P(B) + P(d1) P(C)$ $= \qquad \frac{3}{10} P(B) P(B) + P(B) P(C) + P(B) P(C)$ $= \qquad \frac{3}{10} P(B) P(B) P(B) + P(B) P(C)$ $= \qquad \frac{3}{10} P(B) P(B) P(B) P(C) + P(B) P(C)$ $= \qquad \frac{3}{10} P(B) P(B) P(B) P(C) + P(B) P(C)$ $= \qquad \frac{3}{10} P(B) P(B) P(B) P(C) P(C)$ $= \qquad \frac{3}{10} P(B) P(B) P(B) P(B) P(B) P(B) P(B) P(B)$			
$P(B) = 0.3 \qquad deflects, P(d1) \qquad 1/0 \qquad 1/3 \qquad 1/4$ $P(C) = 0.2 \qquad change mind, P(m1) \qquad 1/0 \qquad 1/6 \qquad 3/8$ $i) \text{ find } P(A \mid m) = \qquad P(m \mid B) P(B) + P(m \mid C) P(C)$ $= \qquad (3/0) (0.5)$ $(3/0) (0.5) + (1/0) (0.5) + (5/8) (0.2)$ $= 0.545$ $ii) \text{ Find } P(C \mid w) = \qquad P(w \mid P(B) \mid P(B) \mid P(B) \mid P(W \mid C) \mid P(C) \mid $			
P(C) = 0.2 change mind, P(m1) $\frac{1}{10}$ $\frac$		75 73 78	
i) find $P(A \mid m) = P(m \mid n) P(n)$ $P(m \mid n) P(n) + P(m \mid B) P(B) + P(m \mid C) P(C)$ $= \frac{(3/10)(0.5)}{(3/10)(0.5)} + \frac{(3/10)(0.5)}{(3/10)(0.5)} + \frac{(3/10)(0.5)}{(0.5)} + $		70 /2 /4	
i) find $P(A \mid m) = P(m \mid A) P(B)$ $P(m \mid A) P(B) + P(m \mid B) P(B) + P(m \mid C) P(C)$ $= \frac{(3/10)(0.5)}{(3/10)(0.5)} + \frac{(8/10)(0.5)}{(8/10)(0.5)} + \frac{(8/10)(0.5)}{(8/10)(0.5)}$ $= 0.545$ ii) find $P(C \mid w) = P(w \mid C) P(C)$ $P(w \mid A) P(B) + P(w \mid B) P(B) + P(w \mid C) P(C)$ $= \frac{(3/10)(0.5)}{(3/10)(0.5)} + \frac{(3/10)(0.5)}{(3/10)(0.5)} + \frac{(3/10)(0.5)}{(3/10)(0.5)}$ $= \frac{(3/10)(0.5)}{(3/10)(0.5)} + \frac{(3/10)(0.5)}{(3/10)(0.5)} +$	_	P(C) = 0.2 change mind, P(ml) 3/10 1/6 3/8	
$P(m R) P(R) + P(m E) P(E) + P(m C) P(C)$ $= \frac{(3/10)(0.5)}{(3/10)(0.5)} + \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= 0.545$ $P(w C) P(C)$ $P(w R) P(R) + P(w E) P(E) + P(w C) P(C)$ $= \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= 0.158$ $P(d R) P(E) + P(d E) P(E) + P(d C) P(E)$ $= \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= \frac{(3/8)(0.2)}{(3/8)(0.2)} + \frac{(3/8)(0.2)}{(3/8)(0.2)} + \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= \frac{(3/8)(0.2)}{(3/8)(0.2)} + \frac{(3/8)(0.2)}{(3/8)(0.$	0_		
$P(m A) P(B) + P(m B) P(B) + P(m C) P(C)$ $= \frac{(3/10)(0.5)}{(3/10)(0.5)} + \frac{(3/8)(0.2)}{(0.5)} + \frac{(3/8)(0.2)}{(0.5)}$ $= 0.545$ $P(w C) P(C)$ $P(w A) P(B) + P(w B) P(B) + P(w C) P(C)$ $= \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= \frac{(3/8)(0.2)}{(3/8)(0.5)} + \frac{(3/8)(0.2)}{(3/8)(0.5)} + \frac{(3/8)(0.2)}{(3/8)(0.5)}$ $= \frac{(3/8)(0.5)}{(3/8)(0.5)} + \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= \frac{(3/8)(0.5)}{(3/8)(0.5)} + \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= \frac{(3/8)(0.5)}{(3/8)(0.5)} + \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= \frac{(3/8)(0.2)}{(3/8)(0.2)} + \frac{(3/8)(0.2)}{(3/8)(0.2)}$ $= $		i) find P(AIm) = P(MIA) P(A)	
$ \frac{(3/10)(0.5)}{(3/10)(0.5)} + \frac{(3/8)(0.2)}{(3/8)(0.2)} $ $ = 0.545 $ $ ii) find P(C w) = P(w C)P(C)   = P(w A)P(A) + P(w B)P(B) + P(w C)P(C)   = \frac{(3/8)(0.2)}{(3/8)(0.5) + (1/8)(0.3) + (3/8)(0.2)}   = 0.158   iii) find P(B A) = P(A B)P(B) + P(A C)P(C)   = \frac{(1/2)(0.3)}{(1/2)(0.3) + (1/4)(0.2)} $			
$ \frac{(3/10)(0.5) + (1/6)(0.5) + (3/8)(0.2)}{= 0.545} $ $ ii) \operatorname{Find} P(C W) = P(W C) P(C) $ $ P(W A) P(B) + P(W B) P(B) + P(W C) P(C) $ $ = \frac{(3/8)(0.2)}{(3/5)(0.5) + (1/5)(0.5) + (3/5)(0.2)} $ $ = 0.158 $ $ iii) \operatorname{Find} P(B d) = P(d B) P(B) $ $ P(d A) P(A) + P(d B) P(B) + P(d C) P(C) $ $ = \frac{(1/2)(0.3)}{(1/2)(0.3) + (1/4)(0.2)} $			
ii) find $P(C w) = P(w c) P(C)$ $P(w A) P(A) + P(w B) P(B) + P(w C) P(C)$ $= (3/8) (0.2)$ $(3/8) (0.5) + (1/2) (0.3) + (3/8) (0.2)$ $= 0.158$ iii) find $P(B d) = P(A B) P(B)$ $P(A B) P(A) + P(A B) P(B) + P(A C) P(C)$ $= (1/2) (0.3)$ $(1/10) (0.5) + (1/2) (0.3) + (1/4) (0.2)$			
$P(w A) P(A) + P(w B) P(B) + P(w C) P(C)$ $= \frac{(3/8)(0.2)}{(3/5)(0.5) + (1/3)(0.3) + (3/5)(0.2)}$ $= 0.158$ $ III) find P(B d) = P(d B) P(B)$ $P(d A) P(A) + P(d B) P(B) + P(d C) P(C)$ $= \frac{(1/2)(0.3)}{(1/10)(0.5) + (1/2)(0.3) + (1/4)(0.2)}$		= 0.545	
$P(w A) P(A) + P(w B) P(B) + P(w C) P(C)$ $= \frac{(3/8)(0.2)}{(3/5)(0.5) + (1/3)(0.3) + (3/5)(0.2)}$ $= 0.158$ $ III) find P(B d) = P(d B) P(B)$ $P(d A) P(A) + P(d B) P(B) + P(d C) P(C)$ $= \frac{(1/2)(0.3)}{(1/10)(0.5) + (1/2)(0.3) + (1/4)(0.2)}$			
$ = \frac{(3/8)(0.2)}{(3/5)(0.5) + (1/5)(0.3) + (3/5)(0.2)} $ $ = 0.158 $ $ = 0.158 $ $ = P(d   B) P(B) P(B) P(B) P(B) P(B) P(B) P(B) P$		(i) find P(c/w) = P(w/c) P(c)	
$ = \frac{(3/8)(0.2)}{(3/5)(0.5) + (1/5)(0.3) + (3/5)(0.2)} $ $ = 0.158 $ $ = 0.158 $ $ = P(d   B) P(B) P(B) P(B) P(B) P(B) P(B) P(B) P$		P(WIA) P(A) + P(W16) P(B) + P(W10) P(C)	
$ \frac{(3/5)(0.5) + (1/3)(0.3) + (3/8)(0.2)}{= 0.158} $ $ = 0.158 $ $ P(d B) P(B) = P(d B) P(B) $ $ P(d A) P(A) + P(d B) P(B) + P(d C) P(C) $ $ = (1/2)(0.3) $ $ (1/10)(0.5) + (1/2)(0.3) + (1/4)(0.2) $			
= 0.158 $=  P(d B) P(B) $ $=  P(d B) P(B) $ $=  P(d B) P(B)  +  P(d C) P(C) $ $=  P(d B) P(B)  +  P(d C) P(C) $ $=  P(d B) P(B)  +  P(d C) P(C) $ $=  P(d B) P(B)  +  P(d C) P(C) $ $=  P(d B) P(B)  +  P(d C) P(C) $			
P(d B) P(B) = P(d B) P(B) $P(d B) P(A) + P(d B) P(B) + P(d C) P(C)$ $= (1/2) (0.3)$ $(1/10) (0.5) + (1/2) (0.3) + (1/4) (0.2)$			
P(d A) P(A) + P(d B)P(B) + P(d C) P(C) $= (1/2)(0.3)$ $(1/10)(0.5) + (1/2)(0.3) + (1/4)(0.2)$			
P(d A) P(A) + P(d B)P(B) + P(d C) P(C) $= (1/2)(0.3)$ $(1/10)(0.5) + (1/2)(0.3) + (1/4)(0.2)$		ill) And P(a)d) -	
$= \frac{(1/2)(0.3)}{(1/10)(0.5) + (1/2)(0.3) + (1/4)(0.2)}$			
(1/10) (0.5) + (1/2) (0.3) + (1/4) (0-2)			
= 0.0		(1/10) (0.5) + (1/2) (0.3) + (1/4) (0-2)	
		= 0.0	
	-		

Exercise #8  Of find female adults = 1-0.51  adults $(male) = 0.51$ in = 0.49  adults $(female) = 0.99$ foral $\approx 49.96$ b) given $P(r m) = 0.095$ $P(r f) = 0.017$ Voters only  i) find $P(r m) = 0.095$ 6) find $P(m r) = P(r m) P(m)$ $P(r m)P(m) + P(r f)P(f)$ = $(0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ = $0.835$ iii) find $P(F f) = 0.483$ = $0.983 \times /00000$ intale female $(0.095)(0.995$	No:Date:			
of find female adults = 1-0.51  cidults (male) = 0.51 7 in = 0.49  adults (female) = 0.49 8 fural $\approx 49\%$ b) given $P(r m) = 0.095$ $P(r f) = 0.017$ $voters only$ i) find $P(r m) = 0.095$ ii) find $P(m r) = P(r m) P(m)$ $P(r m) P(m) + P(r f) P(f)$ $= (0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ iii) And $P(F f) = 0.483$ $= 0.983 \times 100000$ $= 98300 people                                 $				
of find female adults = 1-0.51  cidults (male) = 0.51 7 in = 0.49  adults (female) = 0.49 8 fural $\approx 49\%$ b) given $P(r m) = 0.095$ $P(r f) = 0.017$ $voters only$ i) find $P(r m) = 0.095$ ii) find $P(m r) = P(r m) P(m)$ $P(r m) P(m) + P(r f) P(f)$ $= (0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ iii) And $P(F f) = 0.483$ $= 0.983 \times 100000$ $= 98300 people                                 $				
adults $(male) = 0.51$ 7 in $= 0.49$ adults $(male) = 0.49$ 7 fural $\approx 49\%$ b) given $P(r m) = 0.095$ $P(r f) = 0.017$ Voters only  i) find $P(r m) = 0.095$ ii) find $P(r m) = 0.095$ $P(r m) P(m) + P(r f) P(f)$ $P(r m) P(m) + P(r m) P(m)$ $P(r m) P(m) + P(m)$ $P(m) P(m) P(m)$				
a) find female adults = 1-0.51  adults $(male) = 0.51$ in $= 0.49$ adults $(male) = 0.49$ fural $\approx 49\%$ b) given $P(r m) = 0.095$ f $P(r f) = 0.017$ } voters only  i) find $P(r m) = 0.095$ ii) find $P(m r) = P(r m) P(m)$ $P(r m) P(m) + P(r f) P(f)$ $= (0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ iii) $8nd P(f f) = 0.483$ $= 0.983 \times 100000$ $= 98300 people                                 $				
a) find female adults = 1-0.51  adults $(male) = 0.51$ in $= 0.49$ adults $(male) = 0.49$ fural $\approx 49\%$ b) given $P(r m) = 0.095$ f $P(r f) = 0.017$ } voters only  i) find $P(r m) = 0.095$ ii) find $P(m r) = P(r m) P(m)$ $P(r m) P(m) + P(r f) P(f)$ $= (0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ iii) $8nd P(f f) = 0.483$ $= 0.983 \times 100000$ $= 98300 people                                 $				
adults $(male) = 0.51$ 7 in $= 0.49$ adults $(f \neq male) = 0.49$ Foral $\approx 49\%$ b) given $P(r m) = 0.095$ $f(r f) = 0.017$ $f(r m) = 0.095$ ii) find $f(r m) = 0.095$ $f(r m) = f(r m) = f(r m) = f(r f) = f(r f)$ $f(r m) = f(r f) = f(r f) = f(r f) = f(r f)$ $f(r m) = f(r f) = f(r f) = f(r f) = f(r f)$ $f(r m) = f(r f) = f(r f) = f(r f) = f(r f)$ $f(r m) = f(r f) = f(r f) = f(r f) = f(r f)$ $f(r f) = f(r f) = f(r f) = f(r f)$ $f(r f) = f(r f) = f(r f) = f(r f)$ $f(r f) = f(r $	Exercise #8			
adults $(male) = 0.51$ 7 in $= 0.49$ adults $(female) = 0.49$ Foral $\approx 49\%$ b) given $P(r m) = 0.095$ $f(r f) = 0.017$ $f(r m) = 0.095$ ii) find $P(r m) = 0.095$ iii) find $P(m r) = P(r m) P(m)$ $P(r m) P(m) + P(r f) P(f)$ $= (0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ iii) find $P(F f) = 0.483$ $= 0.983 \times 100000$ $= 98300 people                                 $				
adults $f_{temak}$ = 0.49 } rural $\approx 49\%$ b) given $P(r m) = 0.095$ } $P(r f) = 0.017$ } voters only  i) find $P(r m) = 0.095$ ii) find $P(m r) = P(r m) P(m)$ $P(r m) P(m) + P(r f) P(f)$ $= (0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ iii) $g_{temak}$ P( $f_{temak}$ ) = 0.983 $= 0.983 \times 100000$ male $f_{temak}$ rural (A) 0.995 0.017				
i) find $P(r \mid m) = 0.095$ ii) find $P(m \mid r) = P(r \mid m) P(m)$ $P(r \mid m) P(m) + P(r \mid f) P(f)$ $= (0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ iii) find $P(r \mid f) = 0.983$ $= 0.983 \times 100000$ $= 98300 people                                 $		≈47°/0		
i) find $P(r \mid m) = 0.095$ ii) find $P(m \mid r) = P(r \mid m) P(m)$ $P(r \mid m) P(m) + P(r \mid f) P(f)$ $= (0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ iii) find $P(r \mid f) = 0.983$ $= 0.983 \times 100000$ $= 98300 people                                 $		2		
i) find $P(r \mid m) = 0.095$ ii) find $P(m \mid r) = P(r \mid m) P(m)$ $P(r \mid m) P(m) + P(r \mid f) P(f)$ $= (0.095)(0.51)$ $(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ iii) find $P(r \mid f) = 0.483$ $= 0.983 \times 100000$ $= 98300 people                                 $	b] given P(r/m) = 0.095 } P(r/f) = 0	017 Voters only		
(i) find $P(m r) = P(r m) P(m)$ $P(r m)P(m) + P(r f)P(f)$ $= \frac{(0.095)(0.51)}{(0.095)(0.51)}$ $= 0.835$ (iii) $S_{1nd} P(F f) = 0.983$ $= 0.983 \times 100000$ $= 98300 people                                 $	1* 1			
$P(r   m) P(m) + P(r   f) P(f)$ = (0.095)(0.51) $(0.095)(0.51) + (0.017)(0.49)$ = 0.835 $= 0.983 \times 100000$ = 98300 people (rural (R) 0.095) 0.017	i) find P(r/m) = 0.095			
$P(r   m) P(m) + P(r   f) P(f)$ = (0.095)(0.51) $(0.095)(0.51) + (0.017)(0.49)$ = 0.835 $= 0.835$ $= 0.983 \times 100000$ $= 98300 \text{ people}$ $= 48300 \text{ people}$ $= 98300 \text{ people}$ $= 98300 \text{ people}$ $= 98300 \text{ people}$ $= 98300 \text{ people}$		8 1 84		
$= \frac{(0.095)(0.51)}{(0.095)(0.51)}$ $= 0.835$ $= 0.983 \times 100000$ $= 98300 \text{ people}$	(i) find $P(m r) = P(r m) P(m)$			
$(0.095)(0.51) + (0.017)(0.49)$ $= 0.835$ $= 0.983 \times 100000$ $= 98300 \text{ people}$	P(r/m)P(m) + P(r	14)P(4)		
= 0.835  iii) $81nd$ $P(F1f) = 0.983$ = 0.983 × 100000   male   female   = 98300 people   rural (R)   0.095   0.017				
iii) $81nd$ $P(F1F) = 0.983$ = 0.983 × 100000   male female ] = 98300 people   rural (R) 0.095   0.017				
= 0.983 × 100000   male female   = 98300 people   rural (A) 0.095 0.017	= 0.835			
= 0.983 × 100000   male female   = 98300 people   rural (A) 0.095 0.017	[5] 0 n(=,0) 0.442			
= 98300 people (rural (A) 0.095 0.017		4 5 5		
di ban (n) ( v 103 )	= 18000 people			
		argan (A) ( 105 ( 105)		
	100 11 1			

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	Exercise #9
	P(P) = 0.45 i) find $P(P') = 1 - 0.45$
	P(GIP) = 0.40 = 0.55
0	P(GIP') = 0.55
0_	
	ii) And (P1G) = P(G1P) P(P)
	P(GP)P(P) + P(GP)P(P')
	= (0.40)(0.45)
	(0.40) (0.45) + (0.55) (0.55)
	= 0.373
	iii) find (P'   CT) = P(CT   P') P(P')
	P(G/P)P(P) + P(G/P')P(P')
	= (0.55)(0.55)
	(0.40)(0.45) + (0.65)(0.65)
	= 0.617
	1.3 2 1 mm 2 = 10 /4 lm2 0/m2 = 24
	iv) And P(G) = P(G P)P(P) + P(G P')P(P') = (0:40 × 0.45) + (0:55 × 0.55)
	= 0.4825
	- 0.402)