

A

2. a) $A = \{RRR, LLL, SSS\}$

b) $B = \{RLS, RSL, SRL, SLR, LSR, LRS\}$

c) $C = \{RRL, RRS, RLR, RSR, SRR, LRR\}$

d) $D = \{RRL, RRS, RLR, RSR, LRR, SRR, LRL, LLS, LRL, LSL, RLL, SLL, SSR, SSL, SRS, SLS, RSS, LSS\}$

e) $D' = \{RRR, LLL, SSS, RLS, RSL, SRL, SLR, LSR, LRS\}$

$C \cup D = D$

$C \cap D = C$

4. a):

	1	2	3	4		9	10	11	12	13	14	15	16
1	F	F	F	F		V	F	F	F				
2	F	F	F	V		V	F	F	V				
3	F	F	V	V		V	F	V	V				
4	F	F	V	F		V	F	V	F				
5	F	V	V	V		V	F	V	V				
6	F	V	F	V		V	V	F	V				
7	F	V	V	F		V	V	V	F				
8	F	V	F	F		V	V	F	F				



2, 4, 8, 9

(c) 1, 13

(d) 1, 2, 4, 8, 9

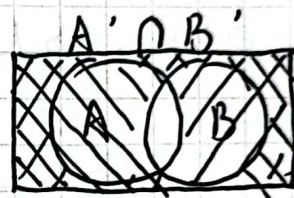
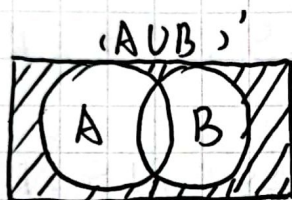
(e) 1, 2, 4, 8, 9, 13 ;

1

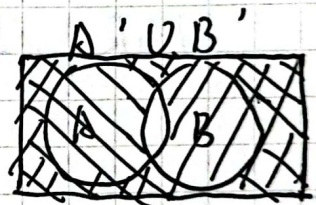
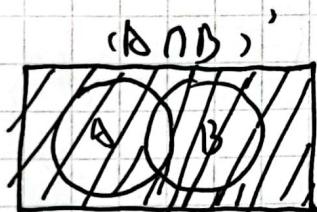
(f) 1, 2, 4, 8, 9, 13 ;

$$b \cap c = \emptyset$$

9. (a)



(b)



2.2

$$12. (a) P(A \cup B) = .5 + .4 - .25 = .65$$

$$(b) P(A \cup B)' = 1 - .65 = .35$$

$$(c) P(A \cap B') = .5 - .25 = .25$$

$$18. p = 1 - \frac{4}{15} = \frac{11}{15}$$



Assume they are named by, A, B, C, D, E

$$P = \frac{1}{C_3^2} = \frac{1}{10}$$

$$b) P = \frac{4}{C_3^2} = \frac{2}{5}$$

$$c) P = \frac{6}{C_3^2} = \frac{3}{5}$$

$$30. a) : P A_8^3 = 336$$

$$b) C_{30}^6 = 593775$$

$$c) C_8^2 + C_{10}^2 + C_{12}^2 = 83160$$

$$d) P = \frac{83160}{593775} = .14$$

$$e) \frac{C_8^6 + C_{10}^6 + C_{12}^6}{83160} = .002$$

$$38. a) P = \frac{C_6^2 \cdot C_9^1}{C_{15}^3} = .2967$$

$$b) P = \frac{C_4^3 + C_5^3 + C_6^3}{C_{13}^3} = 0.747$$

$$c) P = \frac{C_4^1 \cdot C_5^1 \cdot C_6^1}{455} = .2637$$

$$d) P(\text{Exam less than 6}) = \frac{6}{15} + \frac{9 \times 6}{15 \times 14} + \frac{9 \times 8 \times 6}{15 \times 14 \times 13} + \frac{9 \times 8 \times 7 \times 6}{15 \times 14 \times 13 \times 12} + \frac{9 \times 8 \times 7 \times 6 \times 6}{15 \times \dots \times 11} = .9579$$

$$P(\text{Answer}) = 1 - .9579 = .421$$



$$12! / (3!)^4 = 369600$$

c b,

$$\frac{4!}{369600} = .000065$$

