

4. There are 81 outcomes, because
the two schools have 9 choices each
 $\{(1,1), (1,2) \dots (1,9) \dots (9,9)\}$ 3 good!

- Gender before '51 Party
- M R A
- M Y R B
- M Y D C
- M Y R D
- N D E
- N R F
- N R G
- 1 h. 81 - 52 = 29 81 total outcomes
- is sample space - what we found last problem.

i. When excelsior invites a woman, but
foremost doesn't invite someone before '51

$$3 \times 5 = 15 \text{ outcomes}$$

-1 j. $a \cup b = 51$ (from part e)

6. 9^{10} possible outcomes, each school has
9 options.

3.

a. $D_{\heartsuit} \cap C_6$. $\{6\heartsuit\}$

b. You drew anything but a heart card
 $\{A\spadesuit, 2\spadesuit, \dots, A\clubsuit, \dots, A\clubsuit, \dots, K\clubsuit\}$

c. You drew a six or an eight

$$\{6\spadesuit, 6\clubsuit, 6\heartsuit, 6\diamondsuit, \dots, 8\diamondsuit\}$$

d. You draw a card that is both a 6 and an 8

e. You draw a 4 clubs, King, or Ace of diamond
 $(C_4 \cap D_{\diamondsuit}) \cup (D_{\diamondsuit} \cap (K \cup C_A))$

f. You draw a card that is a king, or a spade

$$\{K\spadesuit, K\clubsuit, K\heartsuit, A\spadesuit, 2\spadesuit, \dots, K\clubsuit\}$$

G. $\{2\spadesuit, 3\spadesuit, \dots, K\spadesuit\}$

$$D_{\spadesuit} - C_A$$

H. You drew a 6, but it wasn't a heart

$$C_6 - D_{\heartsuit}$$

I. You drew a card that isn't a heart and is a 6

$$\{6\spadesuit, 6\clubsuit, 6\heartsuit\}$$

J. $C_2 \cup C_3 \cup C_5 \cup C_7$

$$\{2\heartsuit, 2\clubsuit, 2\spadesuit, \dots, 3\heartsuit, \dots, 5\heartsuit, \dots, 7\clubsuit\}$$

K. A 4 card that is either a diamond or heart

$$\{4\heartsuit, 4\clubsuit\}$$

-2 L. You draw a 4 of hearts that is also a diam

3!: not quite.. because the outside D_{diamond} is "united" with what is parenthesis, the card could be a 4 of hearts OR any diamond card

M. You draw a card that's a diamond or heart, and an ace, or 10-K card.

$$\{A\heartsuit, 10\heartsuit, J\heartsuit, Q\heartsuit, K\heartsuit, \dots, K\diamondsuit\}$$

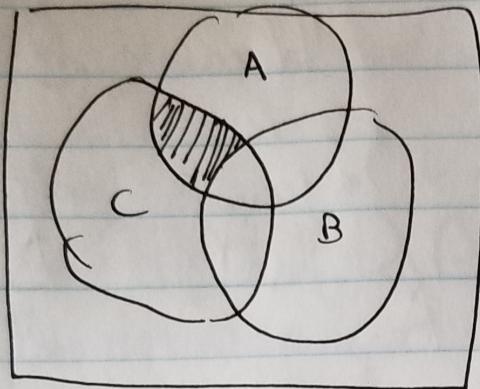
Math 350 HW1

1. a. $A \cup (B \cap C)$ b. $(B - (A \cup C)) \cup (A \cup B \cup C)^c$
c. $(A \cap C) \cup (B \cap C)$ d. $A \cup -B$
e. $(A \cap B) \cup (B \cap C) \cup (C \cap A)$
f. $(A \cup B \cup C)^c \cup (B \cup C)$

59/63

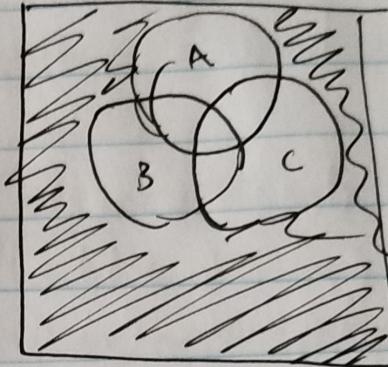
2.

a.

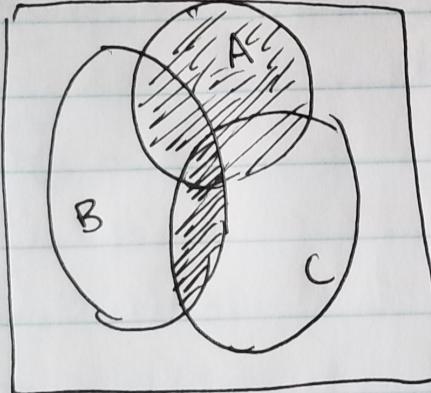


3.

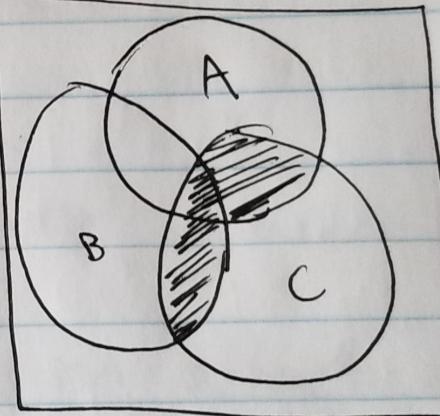
b.



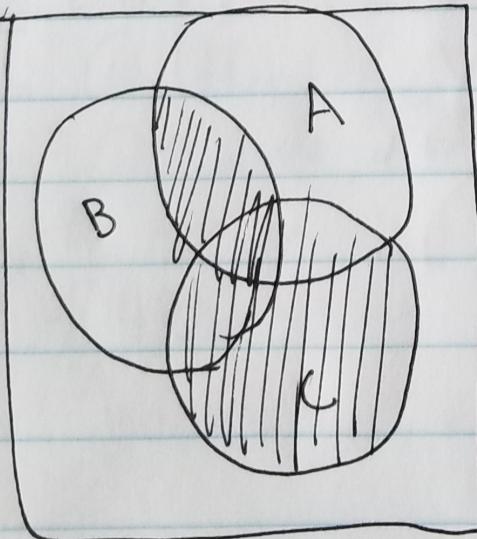
c.



d.



e.



f.

