(1) a) $A \cap B = \{7, 9\}$

b) $B \cup A = \{2, 6, 7, 8, 9\}$

c) $B' = \{2, 4\}$

$B' \cap A = \{2\}$

(2) E = electric

A = airconditioned

$$n(E \cup A) = n(E) + n(A) - n(E \cap A)$$

$$400 = 350 + 325 - n(E \cap A)$$

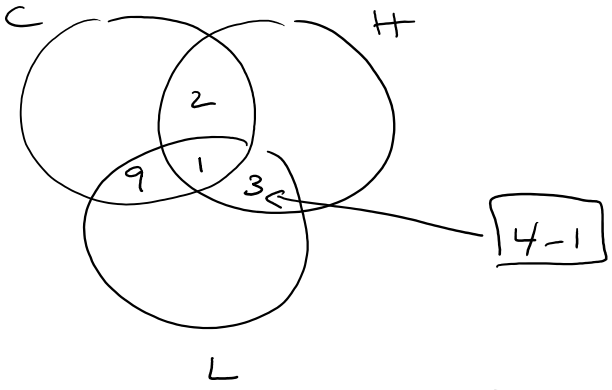
$$-275 = -n(E \cap A)$$

$$n(E \cap A) = 275$$

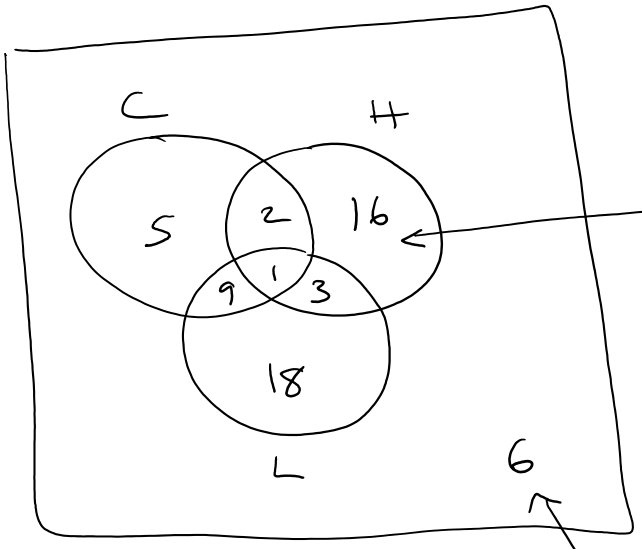
(3) C = classical

H = hiphop

L = lounge



4-1



22-2-1-3

60-5-2-16-9-1-3-18

(4) a) $2 \times (4 \times 3 \times 2 \times 1) \times (3 \times 2 \times 1)$

Novels Business or Business Novels

order Novels

order Business

$= 288$

b) $16 \times 15 \times 14 \times 13 \times 12 \times 11$ or $P(16, 6)$

$= 5,765,760$

c) $C(20, 5) \times C(15, 3)$

Choose 5 of 20 for conference

Choose 3 of 15 remaining for team-building

$= 7,054,320$

Alternatively: $C(20, 3) \times C(17, 5)$