5.

(a) ~Alice ↔ Trudy

(b) (Bob ˅ Trudy) → Alice

(c) ~Bob → Trudy

(d) From (c), ~Bob → Trudy ≡ ~(~Bob) ˅ Trudy ≡ Bob ˅ Trudy

(e) From (b) and (c), Alice

(f) From (a) and (e), ~Trudy

(g) From (d), Bob

Hence, Alice and Bob are coming.

6.

(a)

P(1st Bag ∩ Green) = = 0.28571

P(2nd Bag ∩ Green) = = 0.24324

P(Green) = P(1st Bag ∩ Green) + P(2nd Bag ∩ Green) = 0.52895

(b)

P(1st Bag | Green) = = 0.54014