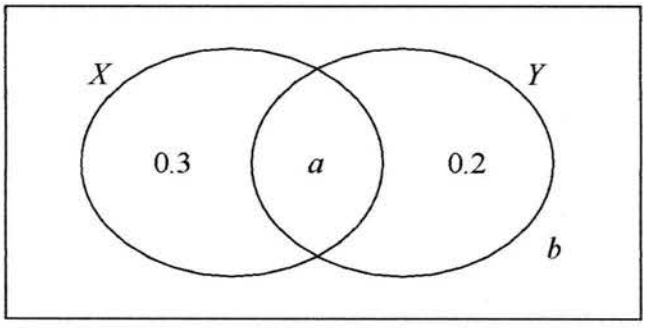
3. The Venn diagram shows probabilities related to two events, X and Y



(a) (i) State the value of $P(Y \cap X')$

(ii) Find $P(Y|X')$ giving your answer in terms of b

(3)

Given that $P(X|Y) = P(Y|X')$

(b) show that $ab = 0.04$

(3)

Given also that $a > b$

(c) find the value of a and the value of b
Show your working clearly.

(5)

(d) Hence show that X and Y are not independent.

(2)