Problem 1

a) $P(Y|X) = P(Y,X)/P(X) = P(Y \cap X)/P(X) = (.70+.015)/(.7+.015+.1+.02)$
$= \boxed{.856}$

b) $P(Y) = .70+.015+.06+.01 = \boxed{.805}$

c) $P(X,Z) = P(X \cap Z) = .7+.1 = \boxed{.800}$

d) $P(X,Z) = P(X) \cdot P(Z)$
$.800 \neq .835(.95)$
$.800 \neq .793$, therefore not independent.