ECO239 (2) Quiz 4 Dec. 12. 2017

According to the survey conducted to IIBF students, 78% of students eat breakfasts, 35% of students play sport regularly, and 28% of students eat breakfast and play sports regularly. Set X: having breakfast or not, Y: play sports regularly. Based on these information, answer the following questions.

1. Fill in the probability table with joint and marginal probabilities.

	Y = 0	Y = 1	
X = 0	(a)	(d)	(g)
X = 1	(b)	(e)	(h)
	(c)	(f)	

2. Calculate E(X), E(Y), Var(X), Var(Y), COV(X,Y), COR(X,Y) by using the probabilities derived in 1.

3. X ~ U(20, 100). Derive PDF and CDF, draw PDF and CDF and calculate the probability P(25<X<75) using CDF. Show the calculated probability both in your PDF and CDF figures.