BAYESIAN NETWORKS and STATISTICAL GENETICS :
Vt 2010
EXERCISE SET 3: due to 4th of May

All identifiers of exercises refer to pp. $129-131$ in

- R.E. Neapolitan: *Probabilistic Methods for Bioinformatics with an Introduction to Bayesian Networks* . Morgan and Kaufman, 2009. ISBN-13: 978-0123704764

- 5.1, 5.2 , 5.5

- Let X, Y and Z be discrete random variables undersom probability distribution P. Show that

$$I_P\left(X, Y \mid Z\right) \Leftrightarrow P(X, Y, Z) = \frac{P\left(X, Y\right) P(Y, Z)}{P(Z)}.$$