

2. Discrete R.V's

12. *Prob mass function:*
13. *Cumulative distribution function:*
14. *Joint prob function:*
15. *Independent r.v.'s (Def 2.2):*
16. *Expected value (Def 2.3):*
17. *Linearity of $E(\cdot)$ (Lemma 2.2, Th 2.1):*
18. *Jensen's inequality (Def 2.4, Th 2.4):*
19. *Binomial r.v. (Def 2.5):*
20. *Mean and var of a binomial:*
21. *Conditional distribution:*
22. *Cond probabilities are probabilities:*
23. *Conditional expectation $E(Y \mid Z = z)$ (Def 2.6, Lemma 2.5):*
24. *Cond expection as r.v., $E(Y \mid Z)$ (Def 2.7, Th 2.7):*
25. *Geometric distribution (Def 2.8):*
26. *Memoryless property (Lemma 2.8):*
27. *Poisson r.v. (Def 5.1):*
28. *Poisson r.v. for rare events:*
29. *Sums of Poi r.v.'s:*