Sample Cheat sheet for AQMF

S-Sample space, E an event in, or subset of S, $Pr(E) = \frac{n(E)}{n(S)}$. If $Pr(E) = 1$ then E is certain to occur, if $Pr(E) = 0$ then E is impossible. Intersection of E and F, $E \setminus F = fx\ 2\ Sjx\ 2\ E$ and $x\ 2\ Fg$. Union of E and F, $E [F = fx\ 2\ Sjx\ 2\ E$ or $x\ 2\ Fg$. The complement of E, $E^c = fx\ 2\ Sjx\ 62\ Eg$. $E \setminus E^c =$ (the empty set) and $E [E^c = S$. So $Pr(E^c) = 1 \quad Pr(E)$. Inclusion-exclusion principle $Pr(E [F) = Pr(E) + Pr(F) \quad Pr(E \setminus F)$. Events E and F are mutually exclusive if $E \setminus F =$. prob of A given B: $Pr(AjB) = \frac{Pr(A \cap B)}{Pr(B)}$ or $Pr(A \setminus B) = Pr(AjB)Pr(B) = Pr(BjA)Pr(A)$. prob trees, the prob of one path is the product of probabilities on all of the branches along the path. If an event can be described by more than one path, then the prob of the event is 71(ev)A