1 Bayesian Network Problems

1. Given this network, calculate $P(B|D = false)$, $P(B|E = true)$ and $P(B|F = false)$. Your solution can be left as a function of the original (implied) CPTs and any additional factors you create.

2. Given the Bayesian Network about, determine:

   (a) if $P_1$ and $P_5$ are independent of $P_6$ given $P_8$
   (b) if $P_2$ is independent of $P_6$ given no information
   (c) if $P_1$ is independent of $P_2$ given $P_8$
   (d) if $P_1$ is independent of $P_2$ and $P_5$ given $P_4$
3. Given the Bayesian Network above, determine if:

(a) A is independent of C given F.
(b) G is independent of D given E.
(c) C is independent of D.