You will be implementing a Generalized Bayes Theorem (pg 472).  It should handle French guy/Financial vids. Also, financial vid's math might be in error.

def Bayes(P\_H, P\_E, P\_E\_ given\_ H):   
P\_H\_ given\_ E = (P\_H \* P\_ E\_ given\_ H) / P\_E   
return P\_H\_ given\_ E

(but all without spaces)