Alternative problem to Exercise 4 Section 3.3

Instead of putting the marketing test before product development, we put it after. We assume there is a cost of 50 (50,000) for the market testing. We label a positive outcome on the marketing test by $I$, and a negative marketing test by $J = I^c$.

We also include a Choice for market testing or no testing, $T$ or $NT$.

We also put costs on certain edges, rather than simply to calculate the net payoff from failure of a high product development, we must subtract 150 from 0, $0 - 150 = -150$.

The decision graph is

(a) The book solves for $q = p(G|I) = 0.87$.
Solve for $q'' = p(G|J)$ and $q = p(I)$ (Assume $p(G) = 0.6$)

(b) Solve for the expected payoff of the subtrees $NT$ & $T$.
Assume $p = 0.9$ and $q = 0.5$. Which is the better choice?

(c) Solve for the expected payoff of Hi & Low. Which will the firm choose?