

Assignment – 1

Problem A solutions:

- 1) Due to forward propagation, Ken activates Ken' hidden person node. Then due to backward propagation, Ken' node activates it's other property nodes – Burglar, Single, HS, Sharks & in 20's. Now, since Nick' and Neal' share the same property nodes – Single, HS & Sharks with Ken', due to forward propagation from these three property nodes, Nick' and Neal' nodes get activated.
- 2) As mentioned in the previous problem, we know that the hidden nodes - Nick' and Neal' get activated a little bit. Now, those nodes in turn due to backward propagation re-activates the shared property nodes – Single, HS & Sharks a bit more than it was earlier.
- 3) When the property nodes – Sharks and in 20's are activated, due to forward propagation, Ken' node gets activated the highest. Now, as seen before, Neal' and Nick' share three property nodes – Sharks, H.S. and Single with Ken'. Similarly, Pete' and Fred' nodes also share three property nodes – in 20's, H.S. and Single with Ken'. Unlike earlier, these two nodes are also activated here additionally because the shared property node – in20's is also one of the source activation nodes. So, that creates more activity in forward propagation for Pete' and Fred' than earlier. Now, these four nodes – Neal', Nick', Pete' and Fred' nodes in turn activate a bit of the other occupation nodes – Bookie and Pusher.
- 4) Typically, Jets are in 20's, Single and have gone to J.H. for schooling. No specific occupation though.