1. Determine the height of the Antenna for TV stations that must be able to reach customers 80Kms away. Use Okumura-Hatta Model for rural environment with fc=75Mhz and Hr=1.5m. Transmitter power 150Kw and received power must be greater than 10^-13 W

Lru = 20 log(4πd/ λ)

Lru = 20 log(4π \* 80000 / 4) [λ = c/f => 3\*108/75\*106 => (4)]

Lru = 138 dBm