

Q1 Answer.

I, For 10db case;

Return loss $10\log(100/P_r) = 10\text{dB}$, (P_r) Power reflected back is 10W

Power radiated by the Antenna is $(100-10) = 90\text{W}$

II, For 3db case;

Return loss $10\log(100/P_r) = 3\text{dB}$, (P_r) Power reflected back is 50W

Power radiated by the Antenna is $(100-50) = 50\text{W}$

III, For 7db case;

Return loss $10\log(100/P_r) = 7\text{dB}$, (P_r) Power reflected back is 20W

Power radiated by the Antenna is $(100-20) = 80\text{W}$