

Special Problem IV.A-1

A transmitter with $f = 3 \text{ GHz}$ radiates toward a receiver 10 km away. The effective aperture of the Tx antenna is $A_{em} = 10 \text{ m}^2$. The gain of the Rx antenna is $G_0 = 100$. If $P_t = 10 \text{ Watts}$, find the received power.