

Program% Modelling of Two-ray ground reflection model

```
clear all;

clc;

fc=800*10^6;

c_light=3*10^8;

lamda=c_light/fc

Gt=1;

Gr=1;

Pt=1;

L=1;

ht=30;

hr=2;


d_tx_rx_km=1:10
d_tx_rx_m= d_tx_rx_km*1000;

PRG = Pt*Gt*Gr*ht^2*hr^2*(1./d_tx_rx_m).^4;

PRGD=10*log10 (PRG);


disp (PRGD)

figure;

plot (d_tx_rx_km, PRGD, '-o')

xlabel('Distance between transmitter and receiver');

ylabel('Received Power(dB) ');

title('Modelling of two-ray ground reflection model');

h = legend('two-ray Model',2);


PRF= Pt*Gt*Gr*(lamda/(4*pi))^2*(1/L)*(1./d_tx_rx_m).^2;
```