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clear all; close all; clc;
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%Operating frequency (Hz)
fc = 77.0e9;

%Transmitted power (W)
Pt = 3e-3;

%Antenna Gain (linear)
G = 10000;

%Minimum Detectable Power
Ps = 1e-10;

%RCS of a car
RCS = 100;

%Speed of light
c = 3*10^8;

%Wavelength
lambda = c/fc;
```

$$R = \left(\frac{\text{Transmitted Power from Radar} \times \text{Gain of the Transmit/Receive Antenna}^2 \times \text{Wavelength of the signal}^2 \times \text{radar cross section}}{(\text{Minimum received power radar can detect} \times (4\pi)^3)} \right)^{1/4}$$

```
Range_of_Radar = ((Pt * G^2 * lambda^2 * RCS)/(Ps * (4*pi)^3))^(1/4);
disp(Range_of_Radar)
```

218.8710