//Principle of Pattern Multiplication applied for array of 4 isotropic (point) sources

//fed with EQUAL AMPLITUDE and EQUAL PHASE

clear;

clc;

lambda=1;

d=lambda/2;

beta=(2\*%pi)/lambda;

delta=0;

phi=0:0.01:2\*%pi

subplot(2,2,1);

EP=cos(%pi/2\*(cos(phi)));

polarplot(phi,abs(EP)); // Element Pattern

title('Element Pattern OR Unit Pattern');

AF=cos(%pi\*(cos(phi)+delta));

subplot(2,2,2);

polarplot(phi,abs(AF)); // Group Pattern

title('Array-Factor Pattern OR Group Pattern');

subplot(2,2,3.5);

polarplot(phi,abs(EP).\*abs(AF));

title('Resultant Array Pattern')