Homework 1

1) In MATLAB, write a small program that would take the Radon transform of the Shepp-Logan phantom, and test the effects of the following parameters in reconstruction.

— Number of projections
— Noise in the projection data
  • Hint:
```
[RP,xp] = radon(P,theta);
RN1=RP.*(1+sd*randn(size(RP)));
```

Homework 1 (cont)

2) Write a program for filtered backprojection in MATLAB.