資訊 107 鞠之浩 HW3

```matlab
clear all;
clc;
%5.41
x=binopdf(10,18,0.7)+binopdf(11,18,0.7)+binopdf(13,18,0.7);
y=hygepdf(10,17000,18,11900)+hygepdf(11,17000,18,11900)+hygepdf(12,17000,18,11900)+hygepdf(13,17000,18,11900);
fprintf('5.41\n');
fprintf('binomial %.16f\n',x);
fprintf('hypergeomeric %.16f\n',y);
figure(1);
hold on;
title('5.41');
xlabel('N');
ylabel('probability');
x=0:18;
y=binopdf(x,18,0.7);
y2=hygepdf(x,17000,18,11900);
plot(x,y,'O',x,y2,'X');
legend('binomial','hypergeomeric');
%5.87
x=binopdf(0,200,0.03);
y=poisspdf(0,6);
fprintf('5.87\n');
fprintf('binomial %.16f\n',x);
fprintf('poisson %.16f\n',y);
figure(2);
hold on;
title('5.87');
xlabel('N');
ylabel('probability distributions');
x=0:200;
y=binopdf(x,200,0.03);
y2=poisspdf(x,6);
plot(x,y,'O',x,y2,'X');
legend('binomial','probability');
```

執行結果:

5.41

binomial 0.4204429643104474

hypergeomeric 0.6079669462554025

5.87

binomial 0.0022612410099958

poisson 0.0024787521766664