<1차 발표>

```
proc print data=z1;

run;


symbol v=none i=join c=blue l=1;

proc gplot data=z1;

plot y*t;

run;


proc arima data=z1;

identify var=y nlag=50;
run;


data newz1; set z1;
        y2=log(y);
run;

proc print data=newz1;run;


proc gplot data=newz1;

plot y2*t;
run;
```

<2차 발표>
(1차 차분)

```
data newz1; set z1;
        y2=log(y);
run;

proc arima data=newz1;

identify var=y2(1) nlag=30;

estimate p=(1)(12)  plot;
estimate p=(1) (12,24)      plot;

estimate  p=(1)(12) q=(1)   plot;
estimate p=(1)(12) q=(1,2)   maxiter=250    plot;

estimate  p=(1,2)(12) q=(1)  plot;

estimate p=(1)(12,24) q=(1)   plot;
estimate  p=(1)(12,24) q=(1,2) plot;
estimate p=(1,2)(12,24) q=(1)      plot;
run;
```

(1차 차분, 계절차분)

```
proc arima data=newz1;

identify var=y2(1,12) nlag=30;

estimate p=1 q= (12)  plot;
estimate p=(1,2) q= (12) plot ;
```

```
estimate p=1 q= (1)(12) plot ;

run;
```

(최종 모형 예측)

```
symbol v=none i=join  l=1;


proc arima data=z1;

identify var=y(1,12) nlag=30;

estimate p=(1,2) q= (12) plot ;

forecast id=t lead=20 interval = month out=fore;

run;

proc gplot data=fore;

plot (forecast l95 u95)*t/overlay;

run;
```