\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Exercise One \*\*\*\*\*\*\*\*\*\*\*\*;

**data** work.future\_costs; /\*1a\*/

Wages = **12874000**;

Retirement\_benefits = **1765000**;

Medical\_benefits = **649000**;

do year=**1** to **10**; /\*1b\*/

Wages = Wages + (**0.03**\*Wages);

Retirement\_benefits = Retirement\_benefits + (**0.014**\*Retirement\_benefits);

Medical\_benefits = Medical\_benefits + (**0.095**\*Medical\_benefits);

total\_costs = sum(Wages, Retirement\_benefits, Medical\_benefits);

output;

end;

**run**;

**proc** **print** data=work.future\_costs; /\*2\*/

**run**;

**data** futureCosts\_mod; /\*3 not sure what the problem here is\*/

set work.future\_costs;

income = **50000000**;

do year=**1** to **10** until(total\_costs > income);

income = income + (**0.01**\*income);

Wages = Wages + (**0.03**\*Wages);

Retirement\_benefits = Retirement\_benefits + (**0.014**\*Retirement\_benefits);

Medical\_benefits = Medical\_benefits + (**0.095**\*Medical\_benefits);

total\_costs = sum(Wages, Retirement\_benefits, Medical\_benefits); output;

end;

**run**;

**proc** **print**; **run**;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Exercise Two \*\*\*\*\*\*\*\*\*\*\*\*;

**data** work.expenses; /\*1\*/

income = **50000000**;

expenses = **38750000**;

do year=**1** to **30** until(expenses>income);

income = income + (**0.01**\*income);

expenses = expenses + (**0.02**\*expenses);

output;

end;

**run**;

**proc** **print** data=work.expenses; /\*2\*/

format income expenses dollar14.2;

**run**;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Exercise Three \*\*\*\*\*\*\*\*\*\*\*\*;

**data** work.income; /\*1\*/

income = **50000000**;

expenses = **38750000**;

do year=**1** to **75**; /\*1a\*/

if expenses>income then leave; /\*1c\*/

income = income + (**0.01**\*income);

expenses = expenses + (**0.02**\*expenses);

output;

end;

**run**;

**proc** **print** data=work.income; /\*2\*/

format income expenses dollar14.2;

**run**;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Exercise Four \*\*\*\*\*\*\*\*\*\*\*\*;

libname order '/home/u62109636/my\_shared\_file\_links/jhshows0/STA5066';

**proc** **contents** data=order.orders\_midyear; /\*1\*/

**run**;

**data** discount\_sales(drop=i); /\*2\*/

set order.orders\_midyear;

array Mon{\*} Month1--Month6; /\*2a\*/

do i=**1** to dim(Mon); /\*2b\*/

Mon{i} = Mon{i} - (**0.05**\*Mon{i});

end;

**run**;

**proc** **print** data=discount\_sales; /\*3\*/

format Month1--Month6 dollar.;

**run**;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Exercise Five \*\*\*\*\*\*\*\*\*\*\*\*;

**data** special\_offer; /\*1\*/

set order.orders\_midyear;

array Mon{\*} Month1--Month3; /\*1a\*/

array projectedSales{**3**};

do i=**1** to dim(Mon);

projectedSales{i} = Mon{i} - (**0.1**\*Mon{i}); /\*1b\*/

end;

Total\_Sales = sum(Month1, Month2, Month3, Month4, Month5, Month6); /\*c(i)\*/

Projected\_Sales = Sum(of projectedSales{\*}, Month4, Month5, Month6); /\*c(ii)\*/

Difference = Total\_Sales - Projected\_Sales; /\*c(iii)\*/

keep Total\_Sales Projected\_Sales Difference; /\*c(iv)\*/

**run**;

**proc** **print** data=special\_offer; /\*2\*/

sum Difference; /\*2a\*/

format Total\_Sales Projected\_Sales Difference dollar.; /\*2b\*/

**run**;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Exercise Six \*\*\*\*\*\*\*\*\*\*\*\*;

**data** preferred\_cust;

set order.orders\_midyear;

array Mon{\*} Month1--Month6; /\*1\*/

array Target{**6**} (**200**,**400**,**300**,**100**,**100**,**200**); /\*2\*/

array Over{**6**}; /\*3\*/

do i=**1** to **6**; /\*4\*/

Over{i} = Mon{i} - Target{i};

end;

Total\_Over = sum(of Over{\*}); /\*5\*/

if Total\_Over > **500**; /\*6\*/

keep Customer\_ID Over1--Over6 Total\_Over; /\*7\*/

**run**;

**proc** **print** data=preferred\_cust; /\*8\*/

**run**;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Exercise Seven \*\*\*\*\*\*\*\*\*\*\*\*;

**proc** **print** data=order.test\_answers; /\*1\*/

**run**;

**data** passed failed; /\*2\*/

set order.test\_answers;

array correct{**10**} \_temporary\_;

array answer{\*} Q1--Q10;

array answer\_key{**10**} $ \_temporary\_ ('A','C','C','B','E', 'E','D','B','B','A'); /\*2b\*/

do i=**1** to dim(answer);

if answer{i} eq answer\_key{i} then correct{i} = **1**;

else correct{i} = **0**;

end;

Score = sum(of Correct{\*}); /\*2a\*/

if (Score ge **7**) then output passed; /\*2c\*/

else output failed; /\*2d\*/

drop i;

**run**;

**proc** **print** data=passed; /\*3\*/

title"employees that passed";

**run**;

**proc** **print** data=failed;

title"employees that failed";

**run**;

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*Exercise Eight \*\*\*\*\*\*\*\*\*\*\*\*;

**proc** **means** data=order.labsubset; /\*1\*/

**run**;

**data** work.examsub2(drop=i); /\*2\*/

set order.labsubset;

array exam{**10**} hgp--urp; /\*2a\*/

array unknown{**10**} \_temporary\_ (**2**\***88888**, **888**, **8888**, **2**\***888**,

**8888**, **88888**, **888**, **88888**); /\*2b\*/

do i=**1** to **10**; /\*2c\*/

if exam{i} eq unknown{i} then exam{i} = .;

end;

**run**;

**proc** **means** data=work.examsub2; /\*3\*/

**run**;