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HW7

Problem 1:

```
DATA homegarden;
INPUT Name $ 1-7 Tomato Zucchini Peas Grapes;
Zone = 14;
Type = 'home';
Zucchini = Zucchini * 10;
Total = Tomato + Zucchini + Peas + Grapes;
PerTom = (Tomato / Total) * 100;
DATALINES;
Gregor    10 2 40 0
Molly  15 5 10 1000
Luther  50 10 15 50
Susan     20 0 . 20
;
PROC PRINT data=homegarden;
TITLE 'Home Gardening Survey';
RUN;
```

Home Gardening Survey

Obs	Name	Tomato	Zucchini	Peas	Grapes	Zone	Type	Total	PerTom
1	Gregor	10	20	40	0	14	home	70	14.2857
2	Molly	15	50	10	1000	14	home	1075	1.3953
3	Luther	50	100	15	50	14	home	215	23.2558
4	Susan	20	0	.	20	14	home	.	.

```
data _null_;
    set homegarden;
        file 'C:\Users\Stephen Hanna\Documents\Classes\AMS
394\SASdata\homegarden.dat' ;
put Name $ 1-7 Tomato Zucchini Peas Grapes;
run;
```

```
DATA homegarden;
INFILE ' D:\Users\mshu\Desktop\Garden.txt';
INPUT Name $ 1-7 Tomato Zucchini Peas Grapes;
Zone = 14;
Type = 'home';
Zucchini = Zucchini * 10;
Total = Tomato + Zucchini + Peas + Grapes;
PerTom = (Tomato / Total) * 100;
PROC PRINT DATA = homegarden;
TITLE 'Home Gardening Survey';
RUN;
```

Home Gardening Survey

Obs	Name	Tomato	Zucchini	Peas	Grapes	Zone	Type	Total	PerTom
1	Gregor	10	20	40	0	14	home	70	14.2857
2	Molly	15	50	10	1000	14	home	1075	1.3953
3	Luther	50	100	15	50	14	home	215	23.2558
4	Susan	20	0	.	20	14	home	.	.

Problem 2:

```
DATA contest;
INPUT Name $16. Age 3. +1 Type $1. +1 Date MMDDYY10.
(Scr1 Scr2 Scr3 Scr4 Scr5) (4.1);
AvgScore = MEAN(Scr1, Scr2, Scr3, Scr4, Scr5);
DayEntered = DAY(Date);
TotalScore=SUM(Scr1, Scr2,
Scr3, Scr4, Scr5);
Type = UPCASE(Type);
DATALINES;
Alicia Grossman  13 c 10-28-2003 7.8 6.5 7.2 8.0 7.9
Matthew Lee       9 D 10-30-2003 6.5 5.9 6.8 6.0 8.1
Elizabeth Garcia 10 C 10-29-2003 8.9 7.9 8.5 9.0 8.8
Lori Newcombe     6 D 10-30-2003 6.7 5.6 4.9 5.2 6.1
Jose Martinez     7 d 10-31-2003 8.9 9.510.0 9.7 9.0
Brian Williams   11 C 10-29-2003 7.8 8.4 8.5 7.9 8.0
;
PROC PRINT DATA = contest;
TITLE 'Pumpkin Carving Contest';
RUN;
```

Pumpkin Carving Contest

Obs	Name	Age	Type	Date	Scr1	Scr2	Scr3	Scr4	Scr5	AvgScore	DayEntered	TotalScore
1	Alicia Grossman	13	C	16006	7.8	6.5	7.2	8.0	7.9	7.48	28	37.4
2	Matthew Lee	9	D	16008	6.5	5.9	6.8	6.0	8.1	6.66	30	33.3
3	Elizabeth Garcia	10	C	16007	8.9	7.9	8.5	9.0	8.8	8.62	29	43.1
4	Lori Newcombe	6	D	16008	6.7	5.6	4.9	5.2	6.1	5.70	30	28.5
5	Jose Martinez	7	D	16009	8.9	9.5	10.0	9.7	9.0	9.42	31	47.1
6	Brian Williams	11	C	16007	7.8	8.4	8.5	7.9	8.0	8.12	29	40.6

Problem 3:

```
DATA sportscars;
INPUT Model $ Year Make $ Seats Color $;
IF Year < 1975 THEN Status = 'classic';
IF Model = 'Corvette' OR Model = 'Camaro' THEN Make = 'Chevy';
```

```
IF Model = 'Miata' THEN DO;
Make = 'Mazda';
Seats = 2;
END;
DATALINES;
Corvette 1955 . 2 black
XJ6 1995 Jaguar 2 teal
Mustang 1966 Ford 4 red
Miata 2002 . . silver
CRX 2001 Honda 2 black
Camaro 2000 . 4 red
;
PROC PRINT DATA = sportscars;
TITLE "Eddy's Excellent Emporium of Used Sports Cars";
RUN;
```

"Eddy's Excellent Emporium of Used Sports Cars"

Obs	Model	Year	Make	Seats	Color	Status
1	Corvette	1955	Chevy	2	black	classic
2	XJ6	1995	Jaguar	2	teal	
3	Mustang	1966	Ford	4	red	classic
4	Miata	2002	Mazda	2	silver	
5	CRX	2001	Honda	2	black	
6	Camaro	2000	Chevy	4	red	

```
data _null_;
    set sportscars;
        file 'C:\Users\Stephen Hanna\Documents\Classes\AMS
394\SASdata\cars.dat' ;
put Model $ Year Make $ Seats Color $;
run;
DATA sportscars;
INFILE ' (path) '; INPUT Model $ Year Make $
Seats Color $;
IF Year < 1975 THEN Status = 'classic';
IF Model = 'Corvette' OR Model = 'Camaro' THEN Make = 'Chevy';
IF Model = 'Miata' THEN DO;
Make = 'Mazda';
Seats = 2;
END;
PROC PRINT DATA = sportscars;
TITLE "Eddy's Excellent Emporium of Used Sports Cars";
RUN;
```

“Eddy’s Excellent Emporium of Used Sports Cars”

Obs	Model	Year	Make	Seats	Color	Status
1	Corvette	1955	Chevy	2	black	classic
2	XJ6	1995	Jaguar	2	teal	
3	Mustang	1966	Ford	4	red	classic
4	Miata	2002	Mazda	2	silver	
5	CRX	2001	Honda	2	black	
6	Camaro	2000	Chevy	4	red	

Problem 4:

```
DATA homeimprovements;
INPUT Owner $ 1-7 Description $ 9-33 Cost;
IF Cost = . THEN CostGroup = 'missing';
ELSE IF Cost < 3000 THEN CostGroup = 'low';
ELSE IF Cost < 9000 THEN CostGroup = 'medium';
ELSE CostGroup = 'high';
DATALINES;
Bob     kitchen cabinet face-lift 1253.00
Shirley bathroom addition         11350.70
Silvia  paint exterior            .
Al      backyard gazebo           3098.63
Norm    paint interior            647.77
Kathy   second floor addition     75362.93
;
PROC PRINT DATA = homeimprovements;
TITLE 'Home Improvement Cost Groups';
RUN;
```

Home Improvement Cost Groups

Obs	Owner	Description	Cost	CostGroup
1	Bob	kitchen cabinet face-lift	1253.00	low
2	Shirley	bathroom addition	11350.70	high
3	Silvia	paint exterior	.	missing
4	Al	backyard gazebo	3098.63	medium
5	Norm	paint interior	647.77	low
6	Kathy	second floor addition	75362.93	high

Problem 5:

(1)

```
DATA comedy;
INPUT Title $ 1-26 Year Type $;
IF Type = 'tragedy' OR Type = 'romance' OR Type = 'history' THEN DELETE;
DATALINES;
A Midsummer Night's Dream 1595 comedy
Comedy of Errors          1590 comedy
Hamlet                    1600 tragedy
Macbeth                   1606 tragedy
Richard III               1594 history
Romeo and Juliet          1596 tragedy
Taming of the Shrew       1593 comedy
Tempest                   1611 romance
;
PROC PRINT DATA = comedy;
TITLE 'Shakespearean Comedies';
RUN;
```

Shakespearean Comedies

Obs	Title	Year	Type
1	A Midsummer Night's Dream	1595	comedy
2	Comedy of Errors	1590	comedy
3	Taming of the Shrew	1593	comedy

(2)

```
DATA comedy;
INPUT Title $ 1-26 Year Type $;
IF Type = 'tragedy' OR Type = 'romance' THEN DELETE;
DATALINES;
A Midsummer Night's Dream 1595 comedy
Comedy of Errors          1590 comedy
Hamlet                    1600 tragedy
Macbeth                   1606 tragedy
Richard III               1594 history
Romeo and Juliet          1596 tragedy
Taming of the Shrew       1593 comedy
Tempest                   1611 romance
;
PROC PRINT DATA = comedy;
TITLE 'Shakespearean Comedies';
RUN;
```

Shakespearean Comedies

Obs	Title	Year	Type
1	A Midsummer Night's Dream	1595	comedy
2	Comedy of Errors	1590	comedy
3	Richard III	1594	history
4	Taming of the Shrew	1593	comedy

(3)

```
DATA comedy;
INPUT Title $ 1-26 Year Type $;
IF Type = 'tragedy';
DATALINES;
A Midsummer Night's Dream 1595 comedy
Comedy of Errors          1590 comedy
Hamlet                    1600 tragedy
Macbeth                   1606 tragedy
Richard III               1594 history
Romeo and Juliet          1596 tragedy
Taming of the Shrew       1593 comedy
Tempest                   1611 romance
;
PROC PRINT DATA = comedy;
TITLE 'Shakespearean Comedies';
RUN;
```

Shakespearean Comedies

Obs	Title	Year	Type
1	Hamlet	1600	tragedy
2	Macbeth	1606	tragedy
3	Romeo and Juliet	1596	tragedy

Problem 6:

```
DATA studentscores;
INPUT Name $ 1-4 Score1 Score2 Score3;
AverageScore = Mean(Score1,Score2,Score3);
DATALINES;
Joe  75  86 90
Mary 88  88 97
Jim  65  05 100
Jane 100 99 78
Mike 90  90 90
Sue  10  60 80
;
PROC SORT DATA = studentscores OUT=sorted;
by descending AverageScore;
run;
proc print data=sorted;
TITLE 'Student Exam Scores';
RUN;
```

Student Exam Scores

Obs	Name	Score1	Score2	Score3	AverageScore
1	Jane	100	99	78	92.3333
2	Mary	88	88	97	91.0000
3	Mike	90	90	90	90.0000
4	Joe	75	86	90	83.6667
5	Jim	65	5	100	56.6667
6	Sue	10	60	80	50.0000