Appendix 1

Worked example answers

Module 1

Command file:

```
input system file name = "C:\SASPAC\SYSFILES\/
2001 STANDARD TABLES FOR WARDS IN ENFIELD.SYS"
print variables ZLABEL ST0150049 ST0020255 /
ST0020270 ST0590031 ST0360229
output print file = C:\SASPAC\REPORT\ MODULE_1.PRN
end
finish
```

Print file:

SASPAC CENSUS ANALYSIS PACKAGE

ZONE ID	ZONE LABEL	ST0150049	ST0020255	ST0020270	ST0590031	ST0360229
00AKGL	Bowes	128	90	70	21	0
00AKGM	Bush Hill Park	141	101	125	109	6
00AKGN	Chase	127	99	115	81	0
00AKGP	Cockfosters	130	111	155	122	7
00AKGQ	Edmonton Green	94	99	109	15	0
00AKGR	Enfield Highway	112	89	90	66	6
00AKGS	Enfield Lock	103	58	76	50	3
00AKGT	Grange	170	122	139	99	3
00AKGU	Haselbury	88	94	87	38	6
00AKGW	Highlands	152	109	147	95	0
00AKGX	Jubilee	91	99	117	51	0
00AKGY	Lower Edmonton	69	95	80	29	0
00AKGZ	Palmers Green	149	102	101	51	3
00AKHA	Ponders End	108	80	70	33	5
00AKHB	Southbury	129	69	107	36	6
00AKHC	Southgate	178	88	143	55	6
00AKHD	Southgate Green	177	84	80	66	3
00AKHE	Town	144	104	150	72	0
00AKHF	Turkey Street	105	87	117	70	3
00AKHG	Upper Edmonton	52	89	91	23	3
00AKHH	Winchmore Hill	186	89	101	84	10

Module 2

Command file:

input system file name = "C:\SASPAC\SYSFILES\/
2001 STANDARD TABLES FOR DISTRICTS IN LONDON.SYS"
input framework file = c:\saspac\frwork\st01.fwk
print tables ST052 ST103
output print file = C:\SASPAC\REPORT\MODULE_2.PRN
end
finish

Print file: (Page 1 of 66)

2001 Census Standard Tables — Area Identifier - 00AA — Grid reference

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Table ST052 TENURE AND PERSONS PER ROOM BY ACCOMMODATION TYPE
Table population: All Households

	ALL HOUSEHOLDS	House or Bungalow			Flat, maisonette or apartment			Caravan or other mobile or temporary structure
		Detached	Semi-detached	Terraced (including end-terrace)	In a purpose built block of flats	Part of a converted or shared house	In a commercial building	
ALL HOUSEHOLDS	4,346	16	11	72	3,868	132	247	0
Up to 0.5 persons per room	2,900	10	8	56	2,588	79	159	0
Over 0.5 and up to 1.0 persons per room	1,315	6	3	16	1,161	47	82	0
Over 1.0 and up to 1.5 persons per room	44	0	0	0	38	3	3	0
Over 1.5 persons per room	87	0	0	0	81	3	3	0
Owned	2,150	6	3	55	2,007	46	33	0
Up to 0.5 persons per room	1,579	3	3	46	1,470	37	20	0
Over 0.5 and up to 1.0 persons per room	535	3	0	9	501	9	13	0
Over 1.0 and up to 1.5 persons per room	12	0	0	0	12	0	0	0
Over 1.5 persons per room	24	0	0	0	24	0	0	0
Rented from Council	624	0	0	6	598	16	4	0
Up to 0.5 persons per room	386	0	0	3	373	6	4	0
Over 0.5 and up to 1.0 persons per room	217	0	0	3	207	7	0	0
Over 1.0 and up to 1.5 persons per room	6	0	0	0	3	3	0	0
Over 1.5 persons per room	15	0	0	0	15	0	0	0
Other social rented	318	0	0	0	300	14	4	0
Up to 0.5 persons per room	178	0	0	0	174	0	4	0
Over 0.5 and up to 1.0 persons per room	121	0	0	0	107	14	0	0
Over 1.0 and up to 1.5 persons per room	12	0	0	0	12	0	0	0
Over 1.5 persons per room	7	0	0	0	7	0	0	0
Private rented or living rent free	1,254	10	8	11	963	56	206	0
Up to 0.5 persons per room	757	7	5	7	571	36	131	0
Over 0.5 and up to 1.0 persons per room	442	3	3	4	346	17	69	0
Over 1.0 and up to 1.5 persons per room	14	0	0	0	11	0	3	0
Over 1.5 persons per room	41	0	0	0	35	3	3	0

Module 3a

Command file:

```
input system file name = "C:\SASPAC\SYSFILES\/
2001 CENSUS AREA STATISTICS FOR OAS IN ENFIELD.SYS"
input framework file = c:\saspac\frwork\CS01.fwk
include 00AKGP0004
include 00AKGY0010 to 00AKGY0013
include 00AKHH0029
print tables CS001
output print file =  C:\SASPAC\REPORT\MODULE_3a.PRN
end
finish
```

Print file: (Page 1 of 12)

2001 Census CAS Tables (Census Area Statistics) Area Identifier - **00AKGP0004** Grid reference
Cockfosters
PRODUCED USING SASPAC **ZONE 00AKGP0004** **Enfield** CROWN COPYRIGHT RESERVED

Table CS001 AGE BY SEX AND RESIDENT TYPE Page 1 of 2
Table population: All people

	ALL PEOPLE	Household Residents		Communal Establishment Residents	
		Males	Females	Males	Females
ALL PEOPLE	213	80	133	0	0
0 to 4	6	0	6	0	0
0	0	0	0	0	0
1	3	0	3	0	0
2	0	0	0	0	0
3	0	0	0	0	0
4	3	0	3	0	0
5 to 9	9	3	6	0	0
5	3	0	3	0	0
6	3	3	0	0	0
7	0	0	0	0	0
8	0	0	0	0	0
9	3	0	3	0	0
10 to 14	3	0	3	0	0
10	0	0	0	0	0
11	0	0	0	0	0
12	3	0	3	0	0
13	0	0	0	0	0
14	0	0	0	0	0
15 to 19	3	0	3	0	0
15	0	0	0	0	0
16	3	0	3	0	0
17	0	0	0	0	0
18	0	0	0	0	0
19	0	0	0	0	0

Module 3b

Command file:

```
input system file name = "C:\SASPAC\SYSFILES\/
2001 CENSUS AREA STATISTICS FOR OAS IN ENFIELD.SYS"
include 00AKHE0044
include 00AKGT0007
include 00AKHB0031
include 00AKHE0041
include 00AKHE0040
include 00AKHE0028
include 00AKHE0036
include 00AKHE0043
include 00AKHE0037
include 00AKHE0039
include 00AKHB0030
print variables with statistics CS0010001 CS0210010
output print file = C:\SASPAC\REPORT\MODULE_3b.PRN
end
finish
```

Print file:

```
 SASPAC CENSUS ANALYSIS PACKAGE

ZONE ID          CS0010001    CS0210010
00AKHE0044             296          175
00AKGT0007             260          167
00AKHB0031             207          108
00AKHE0041             309          148
00AKHE0040             214          100
00AKHE0028             374          166
00AKHE0036             333          169
00AKHE0043             309          148
00AKHE0037             317          155
00AKHE0039             300          150
00AKHB0030             254          101
```

Module 4

Command file:

```
input system file name = "C:\SASPAC\SYSFILES\/
2001 CENSUS AREA STATISTICS FOR OAS IN ENFIELD.SYS"
IF CS0010001 = 0 then percent1524 = 0  else percent1524= (CS0010096+CS0010126) /
CS0010001*100.0
describe variable percent1524 dp= 2 label=percentage  aged 15-24
header all Percentage Population 15-24 OAs in Enfield
print variables with labels cs0010001 percent1524
output print file = c:\saspac\report\MODULE_4.prn
end
finish
```

Print file: (Page 1 of 17)

```
 SASPAC CENSUS ANALYSIS PACKAGE

Percentage Population 15-24 OAs in Enfield

ZONE ID      CAS Table CS   percentage
             001 CS001000   aged 15-24
00AKGL0001            273        11.36
00AKGL0002            199         6.03
00AKGL0003            304        13.16
00AKGL0004            311        15.11
00AKGL0005            234         5.98
00AKGL0006            284        13.73
00AKGL0007            248        11.29
00AKGL0008            255        10.59
00AKGL0009            375        15.20
00AKGL0010            307        15.96
00AKGL0011            226        11.50
00AKGL0012            357        11.20
00AKGL0013            273        10.62
00AKGL0014            328         7.62
00AKGL0015            299        11.04
00AKGL0016            260         8.46
00AKGL0017            313        15.02
00AKGL0018            337        14.54
00AKGL0019            346        14.74
00AKGL0020            392        17.09
00AKGL0021            313        12.14
00AKGL0022            277         8.66
00AKGL0023            310        14.19
00AKGL0024            289        19.38
00AKGL0025            355        11.27
```

Module 5

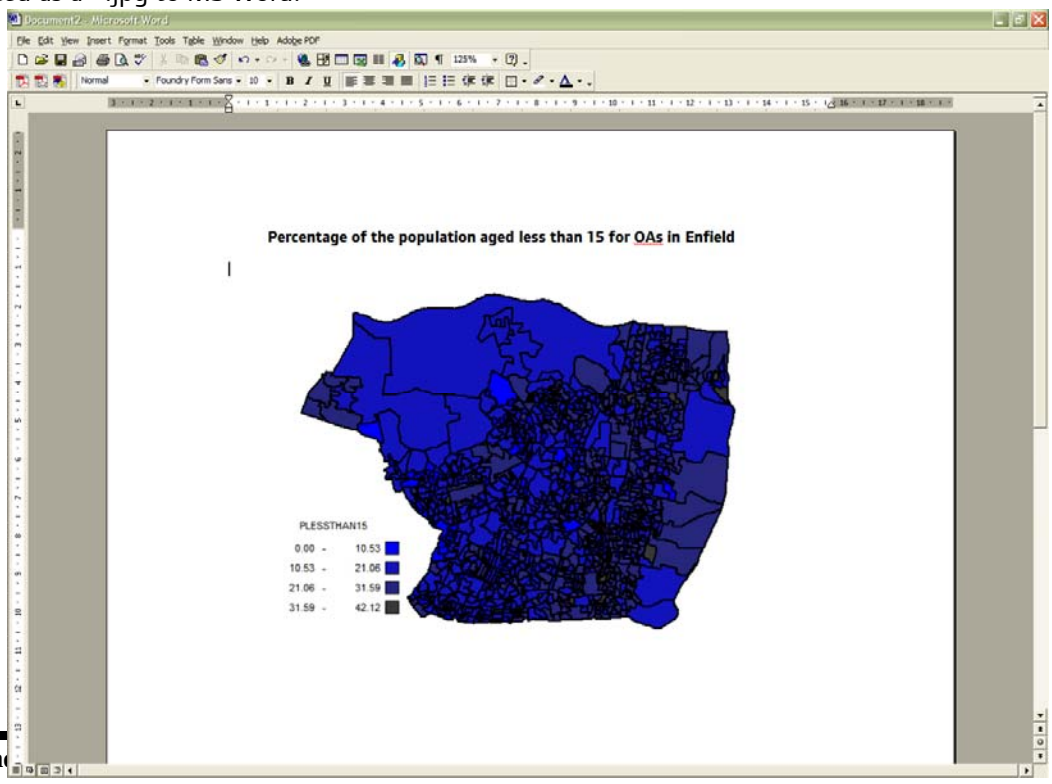
Command file:

```
input system file name = "C:\SASPAC\SYSFILES\/
2001 CENSUS AREA STATISTICS FOR OAS IN ENFIELD.SYS"
plessthan15 = (CS0010006+CS0010036+CS0010066) / CS0010001 *100.0
set countycode on
save ZONEID plessthan15
output CSV file with headers name = /
C:\SASPAC\INTERFAC\Module_5.CSV
end
finish
```

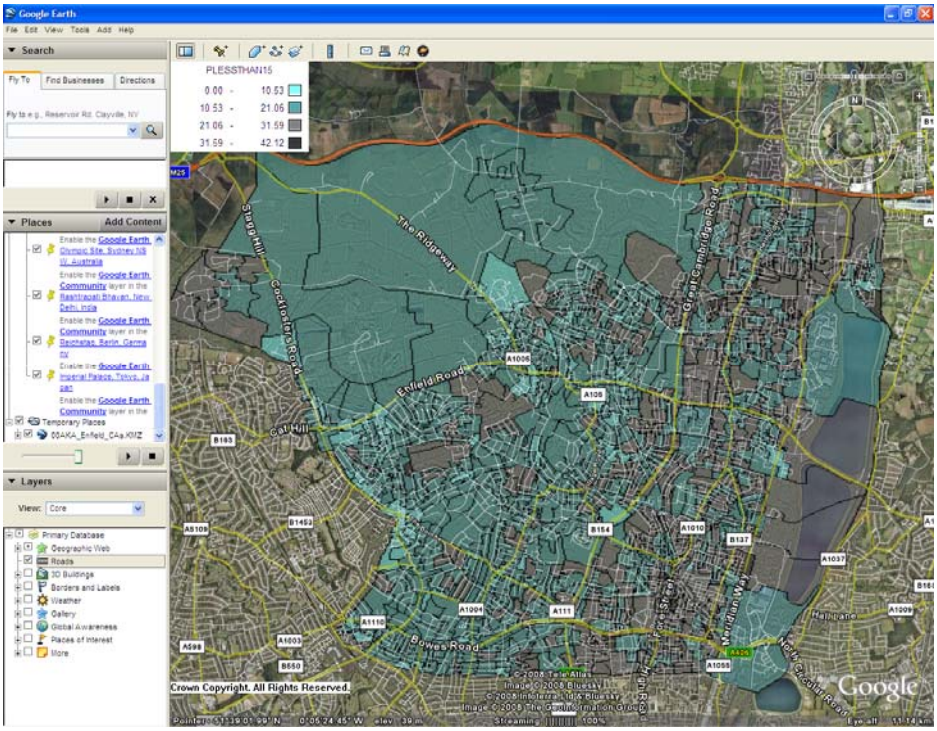
CSV file:

	A	B	C
1	ZONEID	PLESSTHAN15	
2	00AKGL0001	17.22	
3	00AKGL0002	21.61	
4	00AKGL0003	24.01	
5	00AKGL0004	9.32	
6	00AKGL0005	12.82	
7	00AKGL0006	22.18	
8	00AKGL0007	25	
9	00AKGL0008	10.98	
10	00AKGL0009	20.8	
11	00AKGL0010	19.22	
12	00AKGL0011	15.49	
13	00AKGL0012	16.81	
14	00AKGL0013	16.48	
15	00AKGL0014	15.24	
16	00AKGL0015	19.06	
17	00AKGL0016	16.54	
18	00AKGL0017	17.25	
19	00AKGL0018	16.62	
20	00AKGL0019	26.3	
21	00AKGL0020	24.49	

Exported as a *.jpg to MS Word:



Exported as a *.kmz to Google Earth:



Module 6

Command file:

```
input system file name = "C:\SASPAC\SYSFILES\/
2001 CENSUS AREA STATISTICS FOR OAS IN ENFIELD.SYS"
perl15 = (CS0010006+ CS0010036+ CS0010066+/
CS0010101 ) / CS0010001*100.0
SELECT IF perl15>=35
print variables perl15
output print file = /
C:\SASPAC\REPORT\Module_6.PRN
end
finish
```

Print file: (Page 1 of 1)

```
 SASPAC CENSUS ANALYSIS PACKAGE

ZONE ID            PERL15
00AKGQ0003          35.39
00AKGQ0014          37.74
00AKGQ0024          37.79
00AKGR0033          36.36
00AKGS0015          36.20
00AKGS0024          37.77
00AKGY0002          35.16
00AKHC0014          45.05
00AKHF0017          36.06
```

Module 7a

Command file:

```
input system file name = "C:\SASPAC\SYSFILES\2001 CENSUS AREA/ STATISTICS FOR OAS
IN ENFIELD.SYS"
input system file name = "C:\SASPAC\SYSFILES\2001 CENSUS AREA/ STATISTICS FOR
WARDS IN ENFIELD.SYS"
read in series
new zone id = Zone001 name = New Zone 1
USING AREAS - oalevel 00AKGT0007 +(oalevel 00AKGW0001 to/ 00AKGW0003) + oalevel
00AKGW0008*0.33 + wardlevel 00AKGT/
output system file name = C:\SASPAC\SYSFILES\Module_7a.SYS / label=Training Module
Exercise 7a
end
finish
```

Module 7b

Command file:

```
Input gazetteer file with labels name = C:\SASPAC\COMMAND\Enfield.gaz existing zone cols 1
/
to 10 scale factor cols 21 to 24 new zone cols 13 to 18
input system file name = "C:\SASPAC\SYSFILES\2001 CENSUS AREA/ STATISTICS FOR
WARDS IN ENFIELD.SYS"
input system file name = "C:\SASPAC\SYSFILES\2001 CENSUS AREA/ STATISTICS FOR OAS
IN ENFIELD.SYS"
read in series
set zone echo on
output system file name = C:\SASPAC\SYSFILES\Module_7B.SYS/ label=Training Exercise
Module 7B
end
finish
```

Module 8

Command file (Create FWK file):

```
input framework data file name = C:\SASPAC\FRWDATA\MYTABLE.fwd
output framework file name = C:\SASPAC\FRWORK\MYTABLE.FWK
end
finish
```

Command file (Print new table):

```
input system file name = "C:\SASPAC\SYSFILES\2001 STANDARD/ TABLES FOR DISTRICTS IN LONDON.SYS"
input framework file = C:\SASPAC\FRWORK\MYTABLE.FWK
include ualevel 00AC
print tables my01
output print file = C:\SASPAC\REPORT\Module8.PRN
end
finish
```

Print file:

Age Profile of Resident Population of:

Area Name: **Barnet**

Area ID: **00AC**

Total Population:	314,559
Population aged	
0 - 4	20,215
5 - 9	20,537

Module 9

Command file:

```
input system file name =
"C:\SASPAC\SYSFILES\KEY STATISTICS - OAS – CENTRAL LONDON.SYS"
select if distmile(TQ32868024) le 1
* <<radial=1,532865,180245,I,mile,1,,>>
print variables with statistics  KS0010004 KS0150001 /    KS0150011
output print file = c:\saspac\report\Module9.prn
end
finish
```

Print file:

	KS0010004	KS0150001	KS0150011
TOTAL	90310	40360	9939
MEAN	282.22	126.13	31.06
STAND. DEV	107.04	40.71	19.97
MAXIMUM	1229	431	130
MINIMUM	100	63	5
MISS. VAL	0	0	0

Module 10

Step1 – create a new system file containing just the flows within the area of interest (Core Area)
Command file:
input system file name = C:\SASPAC\SYSFILES\SWS2XX_WITH_LABELS.SYS
include 00AKGL to 00AKHH
output system file name =/ C:\SASPAC\SYSFILES\SWS2XX_Enfield_core.SYS label=SWS2XX /
London core
end
finish

Step 2 – rezone the areas outside the core area
Command file:
TEST 71
Input gazetteer file with labels name = /
C:\SASPAC\COMMAND\Ward_to_District_Enfield.gaz /
existing zone cols 1 to 6 new zone cols 15 to 18
input system file name = C:\SASPAC\SYSFILES\SWS2XX_Enfield_core.SYS
set zone echo on
output system file name = C:\SASPAC\SYSFILES\SWS2XX_Enfield_Rezone.SYS label=SWS2XX
/
London rezone
end
finish

Step 3 – Extract and map the number of persons working within the area
Command file:
input system file name = C:\SASPAC\SYSFILES\/ SWS2XX_Enfield_Rezone.SYS
include 00AKGL to 00AKHH
set in&out off
set countycode off
save ORIGID DESTID SWS2010001 SWS2010002 SWS2010003
output CSV file with headers name = C:\SASPAC\INTERFAC\SWS2XX_Enfield.CSV
end
finish

CSV file:

	A	B	C	D	E	F
1	ORIGID	DESTID	SWS2010001	SWS2010002	SWS2010003	
2	00AKGL	00AKGL	812	545	267	
3	00AKGL	00AKGM	12	9	3	
4	00AKGL	00AKGN	12	3	9	
5	00AKGL	00AKGP	41	17	24	
6	00AKGL	00AKGQ	55	25	30	
7	00AKGL	00AKGR	42	26	16	
8	00AKGL	00AKGS	9	6	3	
9	00AKGL	00AKGT	33	15	18	
10	00AKGL	00AKGU	25	12	13	
11	00AKGL	00AKGW	51	10	41	
12	00AKGL	00AKGX	30	14	16	
13	00AKGL	00AKGY	3	3	0	

Data mapped in Mapshore: