STAT 107 Cases and Variables

CAUTION: Column headings are identifiers in a table and they are *not* necessarily variables; you must read the context provided with the data in order to determine the variables for the study.

1. You are hired to analyze the per capita income, in dollars, as well as the percentages of the labor force employed in agriculture, industry, and service occupations for the twenty (20) OECD countries for 1960.

	Per Capita			
COUNTRY	Income	Agriculture	Industry	Service
UNITED KINGDOM	1105	4	56	40
BELGUIM	1005	6	52	42
SWITZERLAND	1361	11	56	33
NETHERLANDS	810	11	49	40
CANADA	1536	13	43	45
SWEDEN	1644	14	53	33
LUXEMBOURG	1242	15	51	34
WEST GERMANY	1035	15	60	25
DENMARK	1049	18	45	37
FRANCE	1013	20	44	36
NORWAY	977	20	49	32
AUSTRIA	681	23	47	30
ICELAND	839	25	47	29
ITALY	504	27	46	28
JAPAN	344	33	35	32
IRELAND	529	36	30	34
SPAIN	290	42	37	21
PORTUGAL	238	44	33	23
GREECE	324	56	24	20
TURKEY	177	79	12	9

- (a) Identify the variables for the study.
- (b) Classify the quantitative variables, if any, as continuous or discrete and provide the appropriate units.
- (c) Identify the qualitative variable(s), if any.
- (d) State the level of measurement for each variable.
- (e) Identify the cases (also known as the experimental units, units, or subjects) for the study.
- 2. After completing your STAT 117 Introduction to Statistics course at Framingham State University, you do some consulting for the Arby's restaurant chain. You review the sandwiches on the Arby's menu to assess the nutritional value of the different sandwiches, recording the type of meat in the sandwiches, the number of calories per serving, the number of calories from fat per serving, the amount, in milligrams, of sodium per serving, and the serving size, in ounces.
  - (a) Identify the cases for the study.
  - **(b)** Identify the purpose of the study that you are conducting for Arby's.
  - (c) Identify the variables for the study and include the appropriate units, if any, for each variable.
  - (d) Classify each variable as qualitative or quantitative. If the variable is quantitative then state if the variable is continuous or discrete.
  - (e) State the level of measurement for each variable.
- 3. While working at the Framingham State University Bookstore, you are asked to compare prices for textbooks sold at the FSU Bookstore with those sold by an online retailer, the Bookstore's major competition. You collect the data regarding the average price for course textbooks and the type of textbooks available at the Framingham State University bookstore and the online retailer.

Identify the variables for the study. Classify each variable as qualitative or quantitative. If the variable is quantitative then state the appropriate units of measure. State the level of measurement for each variable.

Note: You should be able to determine the appropriate units of measure, if any, using common sense.

**4.** For your internship with *the Zoological Society of San Diego*, you are asked to analyze data for the twenty (20) mammals being studied by the Society. For your analysis, you obtain information for the gestation period, in days, the life span, in years, determining both the average life span and the maximum life span, and the average speed, in miles per hour, for these mammals as well as if the mammals are considered to be wild or considered to be predators.

Mammal	Gestation Period	Average Life Span	Maximum Life Span	Average Speed	Wild	Predator
Opossum	13	1	5	7	Yes	Yes
Chipmunk	31	6	8	10	Yes	No
Rabbit	31	5	13	35	No	No
Kangaroo	36	7	24	40	Yes	No
Squirrel	44	10	23	12	Yes	No
Fox	52	7	14	42	Yes	Yes
Dog	61	12	20	39	No	Yes
Cat	63	12	28	30	No	Yes
Cheetah	93	14	20	70	Yes	Yes
Lion	100	15	30	50	Yes	Yes
Pig	112	10	27	11	No	No
Deer	201	8	20	30	Yes	No
Grizzly bear	225	25	50	30	Yes	Yes
Hippopotamus	238	41	54	20	Yes	No
Elk	250	15	27	45	Yes	No
Horse	330	20	50	48	No	No
Donkey	365	12	47	40	No	No
Zebra	365	15	50	40	Yes	No
Giraffe	425	10	34	32	Yes	No
Elephant	660	35	70	25	Yes	No

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- (c) Identify the qualitative variable(s), if any.
- (d) State the level of measurement for each variable.
- (e) Identify the subjects for the study.
- 5. Your Cultural Anthropology instructor offers you the opportunity to assist her by analyzing some data that she collected between September 25, 1986 and October 18, 1987 regarding the male residents of the Gwaimasi Village in the New Guinea rain forest. Delighted that you can put your knowledge of statistics to use, you accept her offer, and she gives you the data. Examining the data, you find that, for this study period, she has collected information about fifteen (15) male members of the village together with their age, their status in the village, the number of nights that each male spent in the hunting area, and the amount, in kilograms, of food from Pigs, Cassowaries, Spear Fishing, or Hook Fishing, that each caught.

Name	Age	Status	Number of Nights in Hunting Area	Pig	Cassowary	Spear Fish	Hook Fish
Bisaeo	45	Married	327	10.9872	0	8.0769	2.4852
Gugwi	45	Married	363	1.452	0	54.0507	13.5762
Wodai	45	Widower	43	0	0	0	12.1174
Mamo	40	Married	310	169.849	107.26	11.687	3.379
Simo	35	Married	295	64.9885	6.49	3.3335	21.8005
Gwase	28	Bachelor/Married	346	99.9594	11.3834	10.3108	12.0062
Tufa	25	Bachelor/Married	155	0	0	2.2475	2.666
Gwuho	25	Bachelor	136	6.2424	0	1.9856	7.0856
Filifi	25	Bachelor	274	289.6728	9.4256	30.688	0.9042
Sinio	22	Married	267	169.9188	43.8681	52.1985	8.01
Maubo	20	Youth	362	32.4714	3.258	16.2176	27.9102
Dogo	15	Youth	314	42.7354	0	11.8064	14.8522
Hegogwa	15	Youth	122	0	0	3.782	15.8722
Gawua	10	Child	263	0	0	0	2.0251
Okre	3	Child	355	0	0	0	0

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