## Data Set 1: Body Data

Body and exam measurements are from 300 subjects (first five rows shown here). AGE is in years, for GENDER 1 = male and 0 = female, PULSE is pulse rate (beats per minute), SYSTOLIC is systolic blood pressure (mm Hg), DIASTOLIC is diastolic blood pressure (mm Hg), HDL is HDL cholesterol (mg/dL), LDL is LDL cholesterol (mg/dL), WHITE is white blood cell count

(1000 cells/ $\mu$ L), **RED** is red blood cell count (million cells/ $\mu$ L), **PLATE** is platelet count (1000 cells/ $\mu$ L), **WEIGHT** is weight (kg), HEIGHT is height (cm), WAIST is waist circumference (cm), ARM CIRC is arm circumference (cm), and BMI is body mass index (kg/m<sup>2</sup>). Data are from the National Center for Health Statistics.

(BODY):

TI-83/84 list names AGE, GENDR, PULSE, SYS, DIAS, HDL. LDL, WHITE, REDBC, PLATE, WT, HT, WAIST, ARMC, BMI

AGE	GENDER (1 = M)	PULSE	SYSTOLIC	DIASTOLIC	HDL	LDL	WHITE	RED	PLATE	WEIGHT	HEIGHT	WAIST	ARM CIRC	ВМІ
43	0	80	100	70	73	68	8.7	4.80	319	98.6	172.0	120.4	40.7	33.3
57	1	84	112	70	35	116	4.9	4.73	187	96.9	186.0	107.8	37.0	28.0
38	0	94	134	94	36	223	6.9	4.47	297	108.2	154.4	120.3	44.3	45.4
80	1	74	126	64	37	83	7.5	4.32	170	73.1	160.5	97.2	30.3	28.4
34	1	50	114	68	50	104	6.1	4.95	140	83.1	179.0	95.1	34.0	25.9

## Data Set 2: Foot and Height

Foot and height measurements are from 40 subjects (first five rows shown here). SEX is gender of subject, AGE is age in years, FOOT LENGTH is length of foot (cm), SHOE PRINT is length of shoe (cm), SHOE SIZE is reported shoe size, and HEIGHT is height (cm) of the subject.

Data from Rohren, Brenda, "Estimation of Stature from Foot and Shoe Length: Applications in Forensic Science." Copyright © 2006. Reprinted by permission of the author. Brenda Rohren (MA, MFS, LIMHP, LADC, MAC) was a graduate student at Nebraska Wesleyan University when she conducted the research and wrote the report.

TI-83/84 list names FTSEX (1 = male), FTAGE, FTLN, SHOPT, (FOOTHT): SHOSZ, FHT

SEX	AGE	FOOT LENGTH	SHOE PRINT	SHOE SIZE	HEIGHT
М	67	27.8	31.3	11.0	180.3
M	47	25.7	29.7	9.0	175.3
M	41	26.7	31.3	11.0	184.8
M	42	25.9	31.8	10.0	177.8
M	48	26.4	31.4	10.0	182.3

## **Data Set 3: Body Temperatures**

Body temperatures (°F) are from 107 subjects taken on two consecutive days at 8 AM and 12 AM (first five rows shown here). SEX is gender of subject, and SMOKE indicates if subject smokes (Y) or does not smoke (N). Data provided by Dr. Steven Wasserman, Dr. Philip Mackowiak, and Dr. Myron Levine of the University of Maryland.

(BODYTEMP):

TI-83/84 Plus list names D1T8, D1T12, D2T8, D2T12 (no list for SEX and SMOKE). Missing data values are represented by 9999.

SEX	SMOKE	DAY 18 AM	DAY 1—12 AM	DAY 2—8 AM	DAY 2-12 AN
M	Υ	98.0	98.0	98.0	98.6
M	Y	97.0	97.6	97.4	-
M	Y	98.6	98.8	97.8	98.6
M	N	97.4	98.0	97.0	98.0
M	N	98.2	98.8	97.0	98.0

## Data Set 4: Births

Data are from 400 births (first five rows shown here). For GENDER 1 = male and 0 = female. LENGTH OF STAY is in days, BIRTH WEIGHT is in grams, and TOTAL CHARGES are in dollars.

(BIRTHS):

TI-83/84 list names FLOS, MLOS, FBWT, MBWT, FCHRG, MCHRG [Separate lists provided for female (F) and male (M) babies. No list for FACILITY, INSURANCE, ADMITTED, and DISCHARGED]

FACILITY	INSURANCE	GENDER (1 $=$ M)	LENGTH OF STAY	ADMITTED	DISCHARGED	BIRTH WEIGHT	TOTAL CHARGES
Albany Medical Center Hospital	Insurance Company	0	2	FRI	SUN	3500	13986
Albany Medical Center Hospital	Blue Cross	1	2	FRI	SUN	3900	3633
Albany Medical Center Hospital	Blue Cross	0	36	WED	THU	800	359091
Albany Medical Center Hospital	Insurance Company	1	5	MON	SAT	2800	8537
Albany Medical Center Hospital	Insurance Company	1	2	FRI	SUN	3700	3633

## **Data Set 5: Family Heights**

Height data are from 134 families (first five rows shown here). Heights are in inches. Only families with at least one child of each gender are included, and only heights of the first son and first daughter are included. The data are from a journal of Francis Galton

(1822-1911), who developed the concepts of standard deviation, regression line, and correlation between two variables.

TI-83/84 list names DAD, MOM, SON1, DGHT1 (FAMHT):

FATHER	MOTHER	FIRST SON	FIRST DAUGHTER
70.0	64.0	68.0	65.0
71.0	65.5	72.0	66.0
69.0	63.5	70.5	65.0
69.5	66.0	71.0	66.5
70.0	58.0	72.0	66.0

#### Data Set 6: Freshman 15

Weights of 67 college students are provided (first five rows shown here). SEX is gender of subject, WT is weights in kilograms, and BMI is measured body mass index. Measurements were made in September of freshman year and then later in April of freshman year.

Results are published in Hoffman, D. J., Policastro, P., Quick, V., and Lee, S. K.: "Changes in Body Weight and Fat Mass of Men and

Women in the First Year of College: A Study of the 'Freshman 15." Journal of American College Health, July 1, 2006, Vol. 55, No. 1, p. 41. Copyright © 2006. Reprinted by permission.

TI-83/84 list names WTSP, WTAPR, BMISP, BMIAP (FRESH15): (no list for SEX)

SEX	WT SEPT	WT APRIL	BMI SEPT	BMI APRIL
M	72	59	22.02	18.14
M	97	86	19.70	17.44
M	74	69	24.09	22.43
M	93	88	26.97	25.57
F	68	64	21.51	20.10

## Data Set 7: IQ and Lead

Data are from 121 subjects (first five rows shown here). Data are measured from children in two consecutive years, and the children were living close to a lead smelter. **LEAD** is blood lead level group  $[1 = low\ lead\ level$  (blood lead levels  $< 40\ micrograms/100\ mL$  in both years),  $2 = medium\ lead\ level$  (blood lead levels  $\ge 40\ micrograms/100\ mL$  in exactly one of two years),  $3 = high\ lead\ level$  (blood lead level  $\ge 40\ micrograms/100\ mL$  in both years)]. **AGE** is age in years, **SEX** is sex of subject  $(1 = male;\ 2 = female)$ .

YEAR1 is blood lead level in first year, and YEAR2 is blood lead level in second year. IQ VERB is measured verbal IQ score. IQ PERF is measured performance IQ score. IQ FULL is measured full IQ score.

Data are from "Neuropsychological Dysfunction in Children with Chronic Low-Level Lead Absorption," by P. J. Landrigan, R. H. Whitworth, R. W. Baloh, N. W. Staehling, W. F Barthel, and B. F. Rosenblum, *Lancet*, Vol. 1, No. 7909.

TI-83/84 list names LEAD, IQAGE, IQSEX, YEAR1, YEAR2, (IQLEAD): IQV, IQP, IQF

LEAD	AGE	SEX	YEAR1	YEAR2	IQ VERB	IQ PERF	IQ FULL
1	11	1	25	18	61	85	70
1	9	1	31	28	82	90	85
1	11	1	30	29	70	107	86
1	6	1	29	30	72	85	76
1	11	1	2	34	72	100	84

## Data Set 8: IQ and Brain Size

Data are from 20 monozygotic (identical) twins (first five rows shown here). **PAIR** identifies the set of twins, **SEX** is the gender of the subject (1 = male, 2 = female), **ORDER** is the birth order, **IQ** is measured full **IQ** score, **VOL** is total brain volume (cm<sup>3</sup>), **AREA** is total brain surface area (cm<sup>2</sup>), **CCSA** is corpus callosum (fissure connecting

left and right cerebral hemispheres) surface area (cm²), CIRC is head circumference (cm), and WT is body weight (kg).

Data provided by M. J. Tramo, W. C. Loftus, T. A. Stukel, J. B. Weaver, M. S. Gazziniga. See "Brain Size, Head Size, and IQ in Monozygotic Twins," *Neurology*, Vol. 50.

TI-83/84 list names PAIR, SEX, ORDER, IQ, VOL, AREA, (IQBRAIN): CCSA, CIRC, BWT

PAIR	SEX (1 = M)	ORDER	IQ	VOL	AREA	CCSA	CIRC	WT
1	2	1	96	1005	1913.88	6.08	54.7	57.607
1	2	2	89	963	1684.89	5.73	54.2	58.968
2	2	1	87	1035	1902.36	6.22	53.0	64.18
2	2	2	87	1027	1860.24	5.80	52.9	58.514
3	2	1	101	1281	2264.25	7.99	57.8	63.95

## **Data Set 9: Bear Measurements**

Data are from 54 anesthetized wild bears (first five rows shown here). AGE is in months, MONTH is the month of measurement 1 = January, SEX is coded with 0 = female and 1 = male, HEADLEN is head length (inches), HEADWDTH is width of head (inches), NECK is distance around neck (in inches), LENGTH is

length of body (inches), CHEST is distance around chest (inches), and WEIGHT is measured in pounds. Data are from Gary Alt and Minitab, Inc.

TI-83/84 list names BAGE, BSEX, BHDLN, BHDWD, (BEARS): BNECK, BLEN, BCHST, BWGHT (no list for MONTH)

MONTH	SEX (1 = M)	HEADLEN	HEADWDTH	NECK	LENGTH	CHEST	WEIGH
7	1	11.0	5.5	16.0	53.0	26.0	80
7	1	16.5	9.0	28.0	67.5	45.0	344
- 6	1	15.5	8.0	31.0	72.0	54.0	416
	1		10.0	31.5	72.0	49.0	348
	0		6.5	22.0	62.0	35.0	166
	7 7 9 7	7 1 7 1 9 1 7 1 7 1 1 7 1 1 1 1 1 1 1 1	7 1 11.0 7 1 16.5 9 1 15.5 7 1 17.0	7 1 11.0 5.5 7 1 16.5 9.0 9 1 15.5 8.0 7 1 17.0 10.0	7 1 11.0 5.5 16.0 7 1 16.5 9.0 28.0 9 1 15.5 8.0 31.0 7 1 17.0 10.0 31.5	7 1 11.0 5.5 16.0 53.0 7 1 16.5 9.0 28.0 67.5 9 1 15.5 8.0 31.0 72.0 7 1 17.0 10.0 31.5 72.0	MONTH         SEX (1 = W)         REACTEN         REACTEN         REACTEN           7         1         11.0         5.5         16.0         53.0         26.0           7         1         16.5         9.0         28.0         67.5         45.0           9         1         15.5         8.0         31.0         72.0         54.0           7         1         17.0         10.0         31.5         72.0         49.0

#### Data Set 10: Manatee Deaths

Annual Florida data for 24 years are provided (first five rows shown here). **DEATHS** is the annual number of Manatee deaths caused by boats, **BOATS** is the number of registered pleasure boats (tens of

thousands), **POP** is the Florida population (millions), and **WATER TEMP** is the annual mean water temperature (°F).

TI-83/84 list names DEATH, BOATS, POP, WTEMP (no list (MANATEE): for YEAR)

YEAR	DEATHS	BOATS	POP	WATER TEMP
1991	53	68	13.3	71.9
1992	38	68	13.5	70.4
1993	35	67	13.7	70.5
1994	49	70	14.0	71.7
1995	42	71	14.3	70.9

#### Data Set 11: Alcohol and Tobacco in Movies

Data are from 50 animated children's movies (first five rows shown here). **LENGTH** is movie length in minutes, **TOBACCO** is tobacco use time in seconds, and **ALCOHOL** is alcohol use time in seconds.

The data are based on Goldstein, Adam O., Sobel, Rachel A., Newman, Glen R., "Tobacco and Alcohol Use in G-Rated Children's

Animated Films." *Journal of the American Medical Association*, March 24/31, 1999, Vol. 281, No. 12, p. 1132. Copyright © 1999. All rights reserved.

TI-83/84 list names CHLEN, CHTOB, CHALC (no list for (CHMOVIE): MOVIE and STUDIO)

MOVIE	STUDIO	LENGTH (MIN)	TOBACCO (SEC)	ALCOHOL (SEC)
		ILLENTICA COLO EVALUAÇÃO	ALPHANOS CONTRACTOR AND CONTRACTOR CONTRACTO	110000000000000000000000000000000000000
Snow White	Disney	83	0	0
Pinocchio	Disney	88	223	80
Fantasia	Disney	120	0	0
Dumbo	Disney	64	176	88
Bambi	Disney	69	0	0

#### Data Set 12: Passive and Active Smoke

Data are from 120 subjects (first five rows shown here) in three groups: **SMOKER** includes subjects who are smokers, **ETS** includes nonsmokers exposed to environmental tobacco smoke, **NOETS** includes nonsmokers not exposed to environmental tobacco smoke. All values are measured levels of serum cotinine (in ng/mL), a

metabolite of nicotine. (When nicotine is absorbed by the body, cotinine is produced.) Data are from the U.S. Department of Health and Human Services, National Center for Health Statistics, Third National Health and Nutrition Examination Survey.

TI-83/84 Plus list names SMKR, ETS, NOETS (SMOKE):

SMOKER	ETS	NOETS
1	384	0
0	0	0
131	69	0
173	19	0
265	1	0

# **Data Set 13: Cigarette Contents**

Data are from 75 cigarettes (first five rows shown here) from three categories: KING includes king-sized cigarettes that are nonfiltered, nonmenthol, and nonlight; MENTH includes menthol cigarettes that are 100 mm long, filtered, and nonlight; and 100 includes 100-mm-long cigarettes that are filtered, nonmenthol, and nonlight. TAR is the

amount of tar per cigarette (milligrams), NICOTINE is the amount of nicotine per cigarette (milligrams), and CO is the amount of carbon monoxide per cigarette (milligrams). Data are from the Federal Trade Commission.

KGTAR, KGNIC, KGCO, MNTAR, TI-83/84 list names MNNIC, MNCO, FLTAR, FLNIC, FLCO (CIGARET):

KING TAR	KING NICOTINE	KING CO	MENTH TAR	MENTH NICOTINE	MENTH CO	100 TAR	100 NICOTINE	100 CC
20	1.1	16	16	1.1	15	5	0.4	4
27	1.7	16	13	0.8	17	16	1.0	19
27	1.7	16	16	1.0	19	17	1.2	17
20		16	9	0.9	9	13	0.8	18
20	1.1	16	14	0.8	17	13	0.8	18

# Data Set 14: Oscar Winner Age

Data are from 87 years (first five rows shown here). Data values are ages (years) of actresses and actors at the times that they won Oscars in the categories of Best Actress and Best Actor. The ages are listed in chronological order by row, so that each row has paired ages from the same year. (Note: In 1968 there was a tie in the Best Actress category, and the mean of the two ages is used; in 1932 there was a tie in the Best Actor category, and the mean of the two ages is used).

These data are suggested by the article "Ages of Oscar-Winning Best Actors and Actresses," by Richard Brown and Gretchen Davis, Mathematics Teacher magazine. In that article, the year of birth of the award winner was subtracted from the year of the awards ceremony, but the ages listed here are calculated from the birth date of the winner and the date of the awards ceremony.

TI-83/84 list names OSCRF, OSCRM (OSCARS):

ACTORS
44
41
62
52
41

## **Data Set 15: Presidents**

Data are from 38 presidents of the United States (first five rows shown here). Presidents who took office as the result of an assassination or resignation are not included. AGE is age in years at time of inauguration. DAYS is the number of days served as president. YEARS is the number of years lived after the first inauguration. HEIGHT is height

(cm) of the president. HEIGHT OPP is the height (cm) of the major opponent for the presidency.

(POTUS):

TI-83/84 list names PRAGE, DAYS, YEARS, PRHT, HTOPP (no list for PRESIDENT). Missing data values are represented by 9999.

PRESIDENT	AGE	DAYS	YEARS	HEIGHT	HEIGHT OPP
Washington	57	2864	10	188	
J. Adams	61	1460	29	170	189
Jefferson	57	2921	26	189	170
Madison	57	2921	28	163	
Monroe	58	2921	15	183	

#### Data Set 16: Nobel Laureates and Chocolate

Data are from 23 countries (first five rows shown here). CHOCOLATE includes chocolate consumption (kg per capita), NOBEL includes the numbers of Nobel Laureates (per 10 million people), POPULATION includes population (in millions), and INTERNET includes the number of Internet users per 100 people.

The data are from "The Real Secret to Genius? Reading Between the Lines," by McClintock, Stangle, and Cetinkaya-Rundel, *Chance*, Vol. 27, No. 1; and "Chocolate Consumption, Cognitive Function, and Nobel Laureates," by Franz Messerli, *New England Journal of Medicine*, Vol. 367, No. 16.

TI-83/84 list names CHOC, NOBEL, POPUL, INTNT (NOBEL): (no list for COUNTRY)

COUNTRY	CHOCOLATE	NOBEL	POPULATION	INTERNET
Australia	4.5	5.5	22	79.5
Austria	10.2	24.3	8	79.8
Belgium	4.4	8.6	11	78.0
Brazil	2.9	0.1	197	45.0
Canada	3.9	6.1	34	83.0

#### **Data Set 17: Course Evaluations**

Data are from 93 college student course evaluations (first five rows shown here). COURSE EVAL includes the mean course rating, PROF EVAL includes the mean professor rating, PROF AGE includes the professor age in years, SIZE includes the number of course evaluations per course, PROF BEAUTY includes the mean beauty rating based on the professor's photo.

Based on data from Andrew Gelman and Jennifer Hill, 2007, "Replication Data for Data Analysis Using Regression Multilevel/ Hierarchical Models," http://hdl.handle.net/1902.1/10285.

TI-83/84 list names CEVAL, PEVAL, PAGE, SIZE, PBTY (EVALS): (no list for PROF, PROF GENDER, PROF PHOTO, and CLASS LEVEL)

COURSE EVAL	PROF EVAL	PROF GENDER	PROF AGE	SIZE	PROF BEAUTY	PROF PHOTO	CLASS LEVEL
4.3	4.7	female	36	24	5.000	color	upper
4.5	4.6	male	59	17	3.000	color	upper
3.7	4.1	male	51	55	3.333	color	upper
4.3	4.5	female	40	40	3.167	color	upper
4.4	4.8	female	31	42	7.333	color	upper
	4.3 4.5 3.7 4.3	4.3 4.7 4.5 4.6 3.7 4.1 4.3 4.5	4.3 4.7 female 4.5 4.6 male 3.7 4.1 male 4.3 4.5 female	4.3     4.7     female     36       4.5     4.6     male     59       3.7     4.1     male     51       4.3     4.5     female     40	4.3     4.7     female     36     24       4.5     4.6     male     59     17       3.7     4.1     male     51     55       4.3     4.5     female     40     40	4.3     4.7     female     36     24     5.000       4.5     4.6     male     59     17     3.000       3.7     4.1     male     51     55     3.333       4.3     4.5     female     40     40     3.167	4.3     4.7     female     36     24     5.000     color       4.5     4.6     male     59     17     3.000     color       3.7     4.1     male     51     55     3.333     color       4.3     4.5     female     40     40     3.167     color

## Data Set 18: Speed Dating

Data are from 199 dates (first five rows shown here). **DEC BY FEM** is decision (1 = yes) of female to date again, **AGE FEM** is age of female, **LIKE BY FEM** is "like" rating by female of male (scale of 1-10), **ATTRACT BY FEM** is "attractive" rating by female of male (scale of 1-10), **ATTRIB BY FEM** is sum of ratings of five attributes (sincerity, intelligence, fun, ambitious, shared interests) by

female of male. Data for males use corresponding descriptors. Higher scale ratings correspond to more positive impressions.

Based on replication data from *Data Analysis Using Regression* and *Multilevel/Hierarchical Models*, by Andrew Gelman and Jennifer Hill, Cambridge University Press.

TI-83/84 list names DBYF, DBYM, AGEF, AGEM, LBYF, (DATE): LBYM, ABYF, ABYM, ATBYF, ATBYM

IALE	AGE FEM	AGE MALE	LIKE BY FEM	LIKE BY MALE	ATTRACT BY FEM	ATTRACT BY MALE	ATTRIB BY FEM	ATTRIB BY MALE
	27	28	7	7	5	8	38	36
	24	26	7	7	7	6	36	38
	26	28	6	3	7	8	29	35
	34	27	8	6	8	6	38	28
	22	25	5	5	7	5	33	34
		22	22 25	22 25 5	22 25 5 5	22 25 5 5 7	22 25 5 5 7 5	22 25 5 5 7 5 33

#### Data Set 19: Car Crash Tests

Data are from 21 cars in crash tests (first five rows shown here). The same cars are used in Data Set 20. The data are measurements from cars crashed into a fixed barrier at 35 mi/h with a crash test dummy in the driver's seat. **HIC** is a measurement of a standard "head injury criterion," **CHEST** is chest deceleration (in *g*, where *g* is a force of gravity), **FEMUR** L is the measured load on the left femur (in lb),

**FEMUR R** is the measured load on the right femur (in lb), **TTI** is a measurement of the side thoracic trauma index, and **PELVIS** is pelvis deceleration (in *g*, where *g* is a force of gravity). Data are from the National Highway Traffic Safety Administration.

TI-83/84 list names HIC, CHEST, FEML, FEMR, TTI, PLVS (CRASH): (no list for CAR and SIZE)

CAR	SIZE	HIC	CHEST	FEMUR L	FEMUR R	TTI	PELVIS
Chev Aveo	Small	371	44	1188	1261	62	71
Honda Civic	Small	356	39	289	324	63	71
Mitsubishi Lancer	Small	275	37	329	446	35	45
VW Jetta	Small	544	54	707	1048	44	66
Hyundai Elantra	Small	326	39	602	1474	58	71

#### Data Set 20: Car Measurements

Data are from 21 cars (first five rows shown here). The same cars are used in Data Set 19. The data are measurements from cars that have automatic transmissions. **WEIGHT** is car weight (lb), **LENGTH** is car length (inches), **BRAKING** is braking distance (feet) from 60 mi/h, **CYLINDERS** is the number of cylinders, **DISPLACEMENT** is the engine displacement (liters), **CITY** is the fuel consumption (mi/gal)

for city driving conditions, HIGHWAY is the fuel consumption (mi/gal) for highway driving conditions, and GHG is a measure of greenhouse gas emissions (in tons/year, expressed as  $CO_2$  equivalents). Data are from the National Highway Traffic Safety Administration.

TI-83/84 list names CWT, CLN, CBRK, CCYL, CDISP, CCITY, (CARS): CHWY, CGHG (no list for CAR and SIZE)

CAR	SIZE	WEIGHT	LENGTH	BRAKING	CYLINDERS	DISPLACEMENT	CITY	HIGHWAY	GHG
Chev Aveo	Small	2560	154	133	4	1.6	25	34	6.6
Honda Civic	Small	2740	177	136	4	1.8	25	36	6.3
Mitsubishi Lancer	Small	3610	177	126	4	2.0	22	28	7.7
VW Jetta	Small	3225	179	137	4	2.0	29	40	6.4
Hyundai Elantra	Small	2895	177	138	4	2.0	25	33	6.6

#### Data Set 21: Earthquakes

Data are from 600 matched pairs (first five rows shown here) of magnitude/depth measurements randomly selected from 10,594 earthquakes recorded in one year from a location in southern California. Only earthquakes with a magnitude of at least 1.00 are used.

MAGNITUDE is magnitude measured on the Richter scale and DEPTH is depth in km. The magnitude and depth both describe the source of the earthquake. The data are from the Southern California Earthquake Data Center.

TI-83/84 list names MAG, DEPTH (QUAKE):

MAGNITUDE	DEPTH
2.45	0.7
3.62	6.0
3.06	7.0
3.30	5.4
1.09	0.5

#### Data Set 22: Tornadoes

Data are from 500 tornadoes (first five rows shown here) arranged chronologically. MONTH is the month of the tornado (1 = January), F SCALE is the Fujita scale rating of tornado intensity, FATALITIES is number of deaths caused by the tornado, LENGTH (MI) is the

distance the tornado traveled in miles, and WIDTH (YD) is the tornado width in yards. Data are from the National Weather Service.

(TORNADO):

TI-83/84 list names FSCAL, FATAL, TLEN, TWDTH (no list for YEAR and MONTH). The 10 missing F-scale values are represented by 9999.

YEAR	YEAR MONTH		FATALITIES	LENGTH (MI)	WIDTH (YD)
1950	5	2	0	3.60	100
1950	5	4	0	34.30	150
1950	6	1	0	0.20	10
1950	8	1	0	0.10	10
1951	6	1100	0	0.10	10

#### Data Set 23: Old Faithful

Data are from 250 eruptions (first five rows shown here) of the Old Faithful geyser in Yellowstone National Park. INT BEFORE is the time interval (min) before the eruption, DURATION is the time (sec) of the eruption, INT AFTER is the time interval (min) after the eruption, HEIGHT (ft) is the height of the eruption, and PRED ERROR

is the error (min) of the predicted time of eruption. Based on data from the Geyser Observation and Study Association.

TI-83/84 list names INTBF, DUR, INTAF, OFHT, PRED (OLDFAITH):

INT BEFORE (MIN)	DURATION (SEC)	INT AFTER (MIN)	HEIGHT (FT)	PRED ERROR (MIN
82	251	83	130	4
99	243	76	125	-13
88	250	86	120	-2
92	240	82	120	-6
86	243	87	130	0

#### Data Set 24: Word Counts

Data are from counts of the numbers of words spoken in a day by 396 male (M) and female (F) subjects in six different sample groups (first five rows shown here). Column M1 denotes the word counts for males in Sample 1, F1 is the count for females in Sample 1, and so on.

Sample 1: Recruited couples ranging in age from 18 to 29

Sample 2: Students recruited in introductory psychology classes, aged 17 to 23

Sample 3: Students recruited in introductory psychology classes in Mexico, aged 17 to 25

Sample 4: Students recruited in introductory psychology classes, aged 17 to 22

Sample 5: Students recruited in introductory psychology classes, aged 18 to 26

Sample 6: Students recruited in introductory psychology classes, aged 17 to 23

Results were published in "Are Women Really More Talkative Than Men?" by Mehl, Vazire, Ramirez-Esparza, Slatcher, Pennebaker, Science, Vol. 317, No. 5834.

TI-83/84 list names M1, F1, M2, F2, M3, F3, M4, F4, M5, F5, (WORDS): M6, F6.

M1	F1	M2	F2	M3	F3	M4	F4	M5	F5	M6	F6
27531	20737	23871	16109	21143	6705	47016	11849	39207	15962	28408	15357
15684	24625	5180	10592	17791	21613	27308	25317	20868	16610	10084	13618
5638	5198	9951	24608	36571	11935	42709	40055	18857	22497	15931	9783
27997	18712	12460	13739	6724	15790	20565	18797	17271	5004	21688	26451
25433	12002	17155	22376	15430	17865	21034	20104		10171	37786	12151

## Data Set 25: Fast Food

Data are from 400 observations (first five rows shown here) of drivethru service times (sec) at different fast-food restaurants. Times begin when a vehicle stops at the order window and end when the vehicle leaves the pickup window. Lunch times were measured between 11:00 AM and 2:00 PM, and dinner times were measured between 4:00 PM and 7:00 PM. Data collected by the author.

TI-83/84 list names MCDL, MCDD, BKL, BKD, WL, WD, (FASTFOOD): DDL, DDD

MCDONALDS LUNCH	MCDONALDS DINNER	BURGER KING LUNCH	BURGER KING DINNER	WENDYS LUNCH	WENDYS DINNER	DUNKIN DONUTS LUNCH	DUNKIN DONUTS DINNER
107	84	116	101	466	56	86	181
139	121	131	126	387	82	201	50
197	119	147	153	368	120	179	177
209	146	120	116	219	116	131	107
281	266	126	175	177	121	126	68

## Data Set 26: Cola Weights and Volumes

Data are from 144 cans of cola (first five rows shown here). WT is weight in pounds and VOL is volume in ounces.

TI-83/84 list names CRGWT, CRGVL, CDTWT, CDTVL, (COLA): PRGWT, PRGVL, PDTWT, PDTVL

COKE REG WT	COKE REG VOL	COKE DIET WT	COKE DIET VOL	PEPSI REG WT	PEPSI REG VOL	PEPSI DIET WT	PEPSI DIET VOL
0.8192	12.3	0.7773	12.1	0.8258	12.4	0.7925	12.3
0.8150	12.1	0.7758	12.1	0.8156	12.2	0.7868	12.2
0.8163	12.2	0.7896	12.3	0.8211	12.2	0.7846	12.2
0.8211	12.3	0.7868	12.3	0.8170	12.2	0.7938	12.3
0.8181	12.2	0.7844	12.2	0.8216	12.2	0.7861	12.2

### Data Set 27: M&M Weights

Data are from 100 weights (grams) of plain M&M candies (first five rows shown here). Data collected by the author.

TI-83/84 list names RED, ORNG, YLLW, BROWN, (MM): BLUE, GREEN

RED	ORANGE	YELLOW	BROWN	BLUE	GREEN
0.751	0.735	0.883	0.696	0.881	0.925
0.841	0.895	0.769	0.876	0.863	0.914
0.856	0.865	0.859	0.855	0.775	0.881
0.799	0.864	0.784	0.806	0.854	0.865
0.966	0.852	0.824	0.840	0.810	0.865

## Data Set 28: Chocolate Chip Cookies

Data are from 170 chocolate chip cookies (first five rows shown here). Brands are Chips Ahoy regular, Chips Ahoy Chewy, Chips Ahoy Reduced Fat, Keebler, and Hannaford. Values are counts of

numbers of chocolate chips in each cookie. Data collected by the author.

TI-83/84 list names CAREG, CACHW, CARF, KEEB, HANNA. (CHIPS):

CHIPS AHOY REG	CHIPS AHOY CHEWY	CHIPS AHOY RED FAT	KEEBLER	HANNAFORD
22	21	13	29	13
22	20	24	31	15
26	16	18	25	16
24	17	16	32	21
23	16	21	27	15

## Data Set 29: Coin Weights

Data are from 222 coins (first five rows shown here) consisting of coin weights (grams). The "pre-1983 pennies" were made after the Indian and wheat pennies, and they are 97% copper and 3% zinc. The "post-1983 pennies" are 3% copper and 97% zinc. The "pre-1964

silver quarters" are 90% silver and 10% copper. The "post-1964 quarters" are made with a copper-nickel alloy.

TI-83/84 list names CPIND, CPWHT, CPPRE, CPPST, CPCAN, (COINS): CQPRE, CQPST, CDOL

INDIAN PENNIES	WHEAT PENNIES	PRE-1983 PENNIES	POST-1983 PENNIES	CANADIAN PENNIES	PRE-1964 QUARTERS	POST-1964 QUARTERS	DOLLAR COINS
3.0630	3.1366	3.1582	2.5113	3.2214	6.2771	5.7027	8.1008
3.0487	3.0755	3.0406	2.4907	3.2326	6.2371	5.7495	8.1072
2.9149	3.1692	3.0762	2.5024	2.4662	6.1501	5.7050	8.0271
3.1358	3.0476	3.0398	2.5298	2.8357	6.0002	5.5941	8.0813
2.9753	3.1029	3.1043	2.4950	3.3189	6.1275	5.7247	8.0241

#### Data Set 30: Aluminum Cans

Data are from 350 cans (first five rows shown here) consisting of measured maximum axial loads (pounds). Axial loads are applied when the tops are pressed into place. **CANS 109** includes cans

that are 0.0109 inch thick, and CANS 111 includes cans that are 0.0111 inch thick.

TI-83/84 list names CN109, CN111 (CANS):

CANS 109	CANS 111
270	287
273	216
258	260
204	291
254	210

# Data Set 31: Garbage Weight

Data are from 62 households (first five rows shown here) consisting of weights (pounds) of discarded garbage in different categories. HH SIZE is household size. Data provided by Masakuza Tani, the Garbage Project, University of Arizona.

(GARBAGE):

TI-83/84 list names HHSIZ, METAL, PAPER, PLAS, GLASS, FOOD, YARD, TEXT, OTHER, TOTAL

METAL	PAPER	PLASTIC	GLASS	FOOD	YARD	TEXTILE	OTHER	TOTAL	
5000	100 M 100 M		0.96	1.04	0.38	0.05	4.66	10.76	
1.09	2.41	0.27						19.96	
1.04	7.57	1.41	3.46	3.68	0.00				
2.57	9.55		4.52	4.43	0.24	0.50	3.60	27.60	
				2 98	0.63	2.26	12.65	38.11	
3.02	8.82	2.83				0.55	2.18	27.90	
1.50	8.72	2.19	6.31	6.30	0.15	0.55	2.10	27.00	
	2.57 3.02	1.09     2.41       1.04     7.57       2.57     9.55       3.02     8.82	1.09     2.41     0.27       1.04     7.57     1.41       2.57     9.55     2.19       3.02     8.82     2.83	1.09 2.41 0.27 0.86 1.04 7.57 1.41 3.46 2.57 9.55 2.19 4.52 3.02 8.82 2.83 4.92	1.09 2.41 0.27 0.86 1.04 1.04 7.57 1.41 3.46 3.68 2.57 9.55 2.19 4.52 4.43 3.02 8.82 2.83 4.92 2.98	METAL         PAPER         PLASTIC         GLAGO           1.09         2.41         0.27         0.86         1.04         0.38           1.04         7.57         1.41         3.46         3.68         0.00           2.57         9.55         2.19         4.52         4.43         0.24           3.02         8.82         2.83         4.92         2.98         0.63           6.31         6.30         0.15	METAL         PAPER         PLASTIC         GLASS         1095         104         0.38         0.05           1.09         2.41         0.27         0.86         1.04         0.38         0.05           1.04         7.57         1.41         3.46         3.68         0.00         0.46           2.57         9.55         2.19         4.52         4.43         0.24         0.50           3.02         8.82         2.83         4.92         2.98         0.63         2.26           3.02         6.30         0.15         0.55	METAL         PAPER         PLASTIC         GLASS         POOD         IAID           1.09         2.41         0.27         0.86         1.04         0.38         0.05         4.66           1.04         7.57         1.41         3.46         3.68         0.00         0.46         2.34           2.57         9.55         2.19         4.52         4.43         0.24         0.50         3.60           3.02         8.82         2.83         4.92         2.98         0.63         2.26         12.65           3.02         6.31         6.30         0.15         0.55         2.18	

# **Data Set 32: Airport Data Speeds**

Data are from 50 airports (first five rows shown here) consisting of data speeds (Mbps) from four different cell phone carriers. Based on data from CNN.

(DATASPED):

TI-83/84 list names VRZN, SPRNT, ATT, TMOBL (no list for AIRPORT CODE)

AIRPORT CODE	VERIZON	SPRINT	ATT	T-MOBILE
RSW	38.5	13.0	9.7	8.6
ORD	55.6	30.4	8.2	7.0
SNA	22.4	15.2	7.1	18.5
MEM	14.1	2.4	14.4	16.7
MKE	23.1	2.7	13.4	5.6