

FIGURE 2.1 MINITAB Bar Graph for Cause of Energy-Related Fatal Accidents

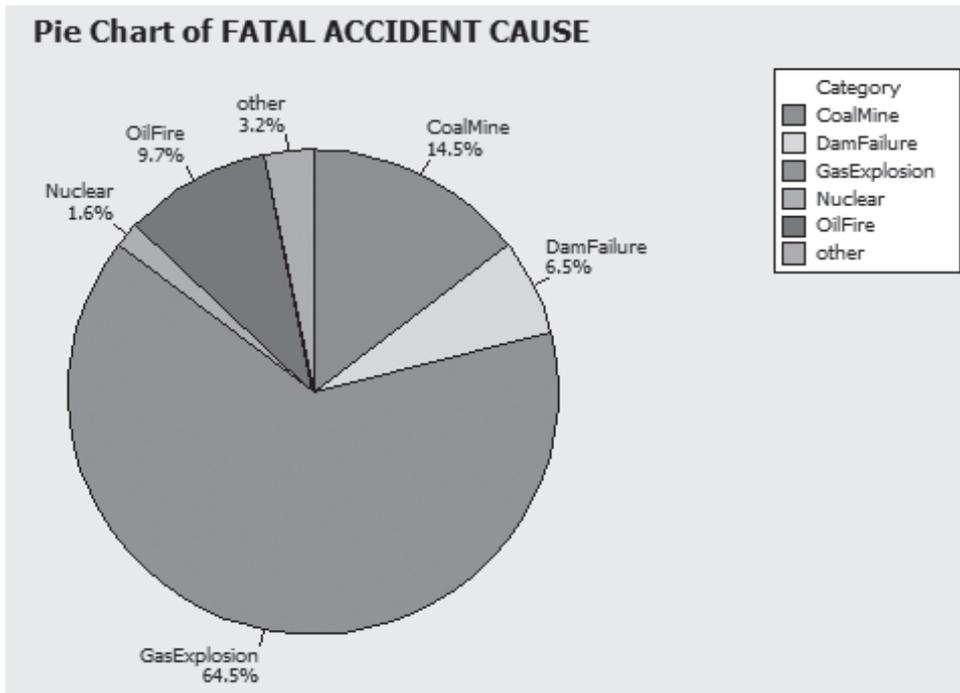


FIGURE 2.2 MINITAB Pie Chart for Cause of Energy-Related Fatal Accidents

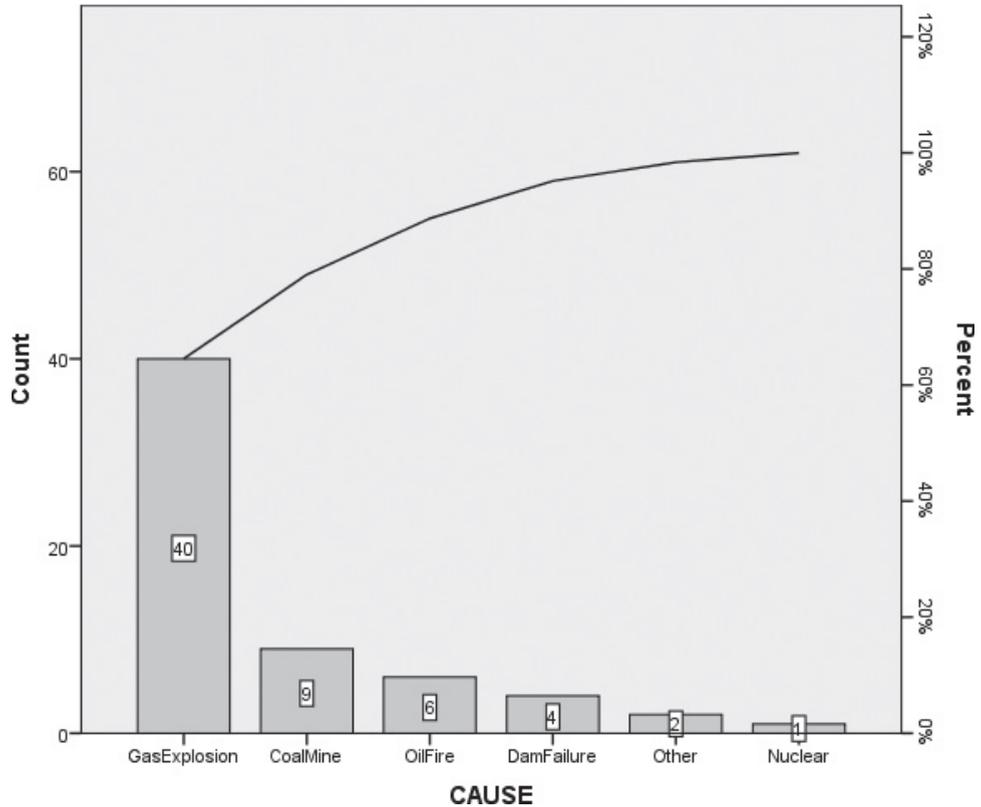


FIGURE 2.3 SPSS Pareto Diagram for Cause of Energy-Related Fatal Accidents

The FREQ Procedure

ICETYPE	Frequency	Percent	Cumulative Frequency	Cumulative Percent
First-year	88	17.46	88	17.46
Landfast	196	38.89	284	56.35
Multi-year	220	43.65	504	100.00

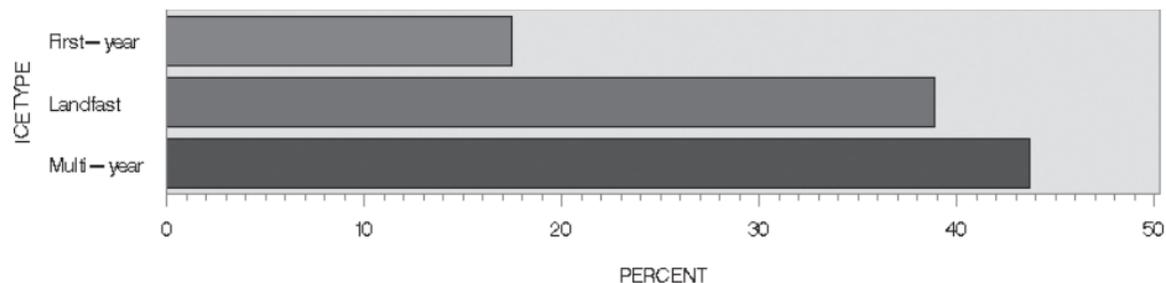


FIGURE 2.4 SAS analysis of ice types for meltponds

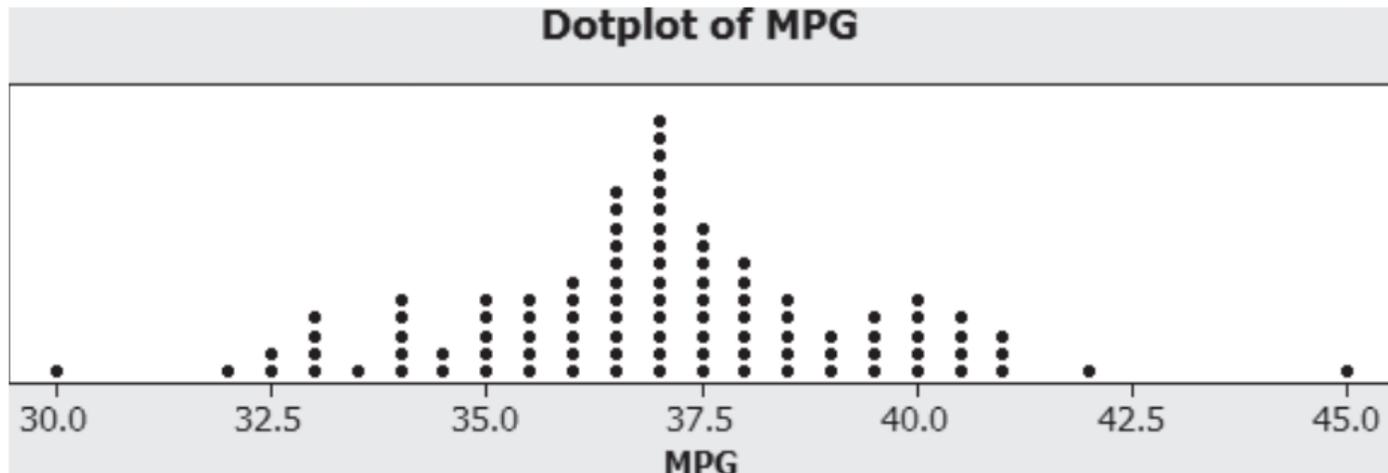


FIGURE 2.5 MINITAB dot plot for 100 EPA mileage ratings

Stem-and-Leaf Display: MPG

Stem-and-leaf of MPG N = 100
Leaf Unit = 0.10

```
1   30  0
2   31  8
6   32  5799
12  33  126899
18  34  024588
29  35  01235667899
49  36  01233445566777888999
(21) 37  000011122334456677899
30  38  0122345678
20  39  00345789
12  40  0123557
5   41  002
2   42  1
1   43
1   44  9
```

FIGURE 2.6 MINITAB stem-and-leaf display for 100 mileage ratings

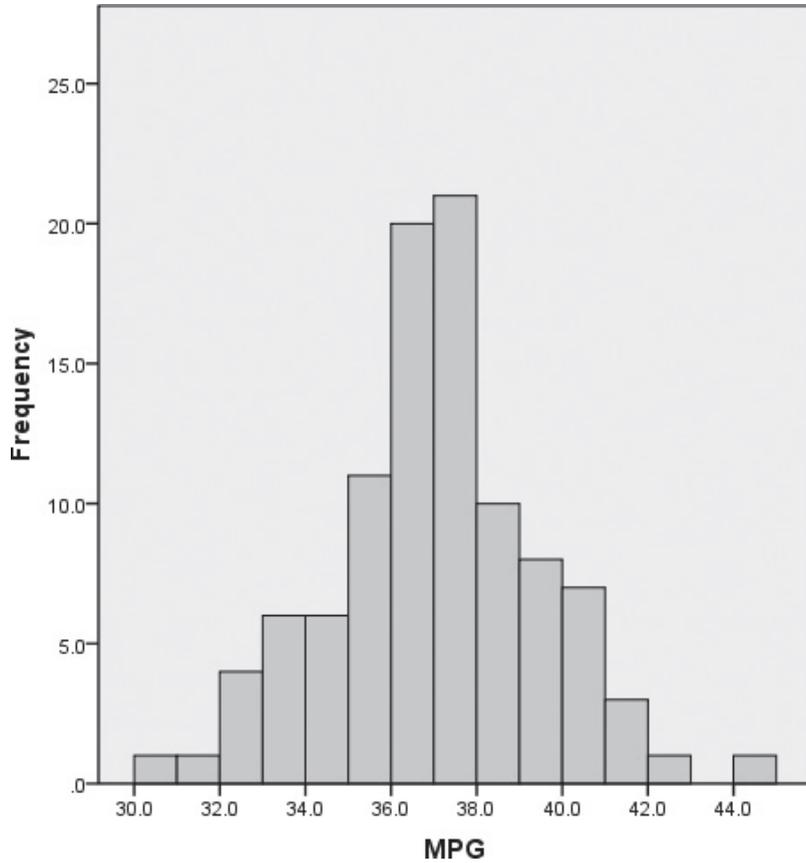


FIGURE 2.7 SPSS Histogram for EPA Gas Mileage Ratings

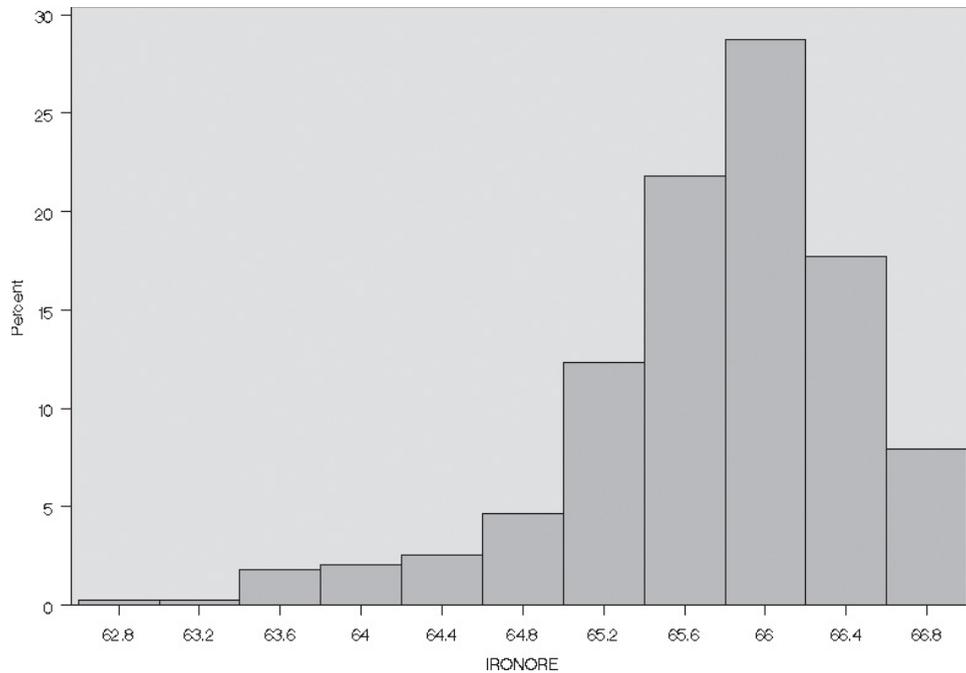


FIGURE 2.8 SAS histogram for iron-ore data

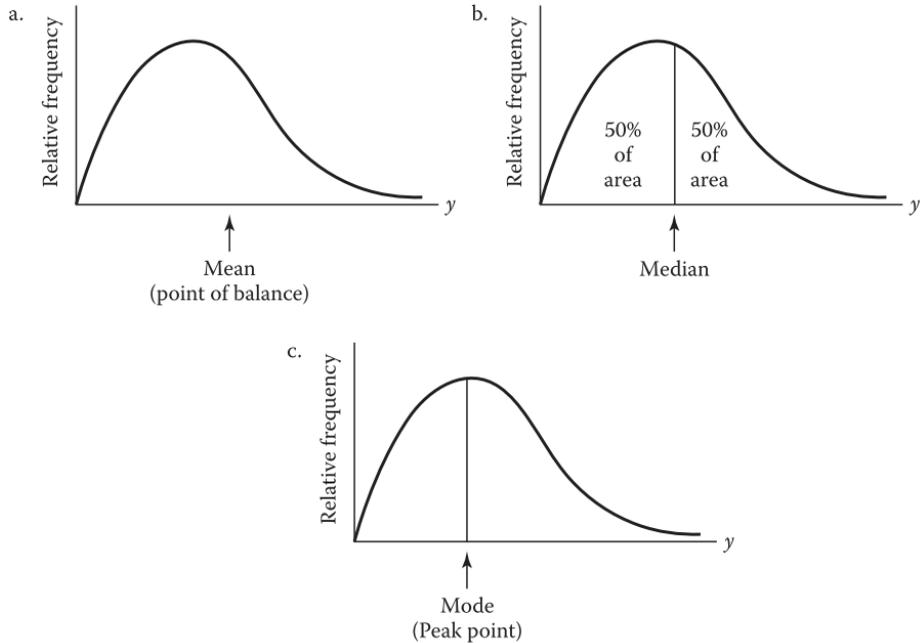


FIGURE 2.9 Interpretations of the mean, median, and mode for a relative frequency distribution

Descriptive Statistics: MAGNITUDE, INT-TIME

Variable	N	Mean	Median	Mode	N for Mode
MAGNITUDE	2929	2.1197	2.0000	1.8	298
INT-TIME	2928	9.771	6.000	2	354

FIGURE 2.10 MINITAB Descriptive Statistics for Earthquake Data

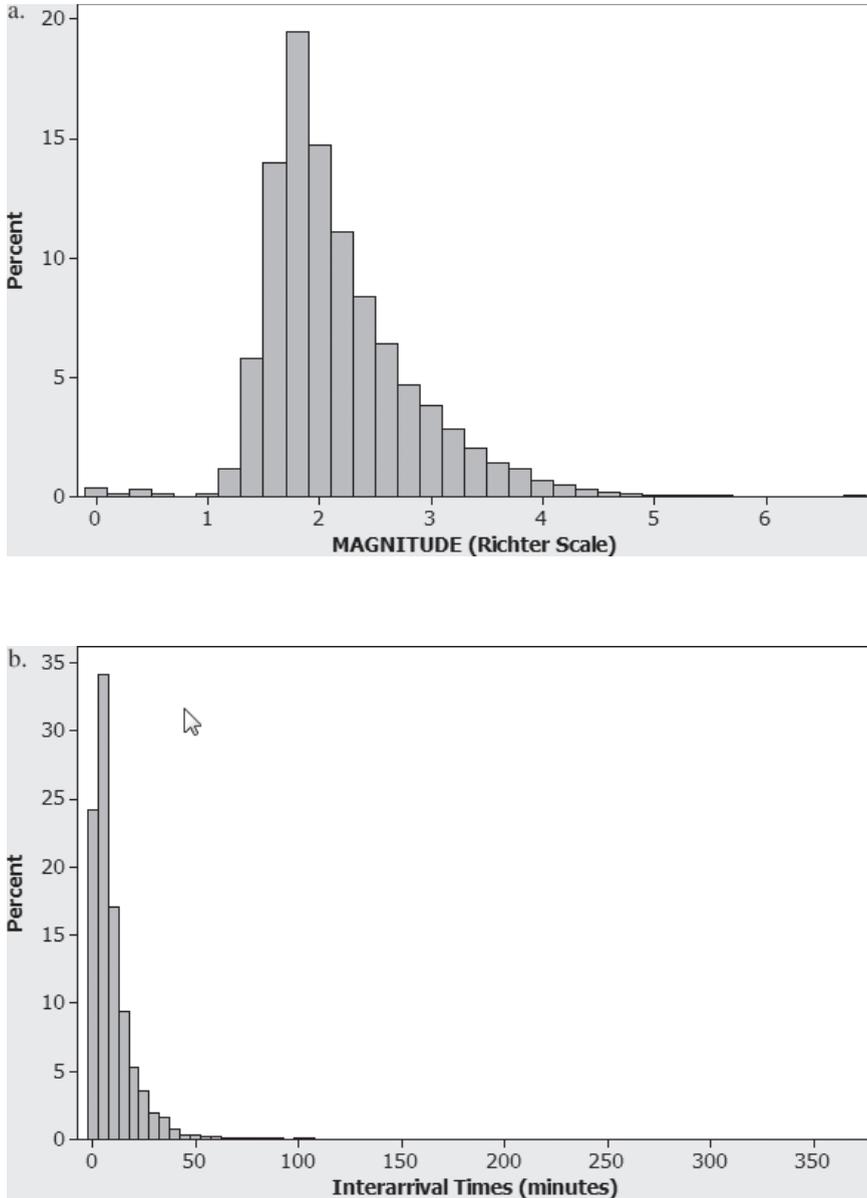


FIGURE 2.11 MINITAB Histograms for Magnitude and Inter-Arrival Times of Aftershocks

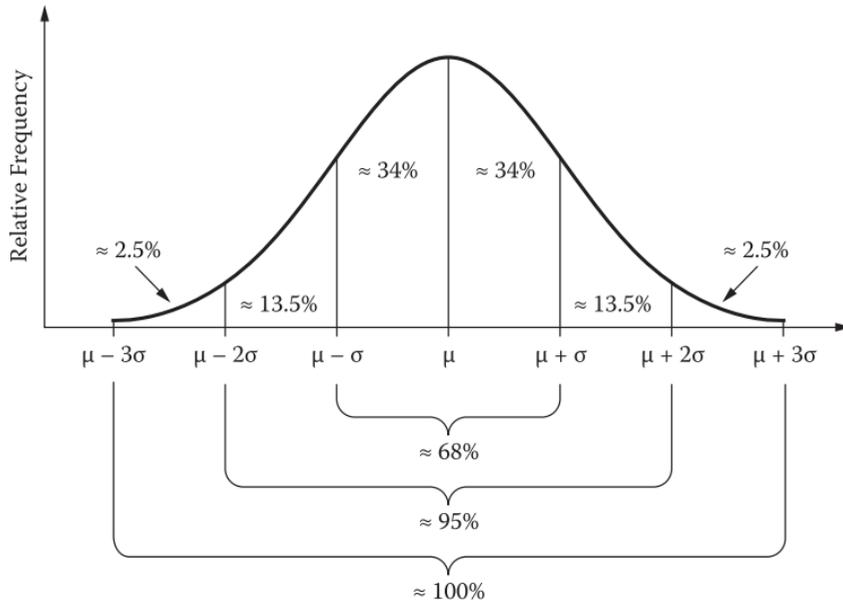


FIGURE 2.12a Empirical Rule

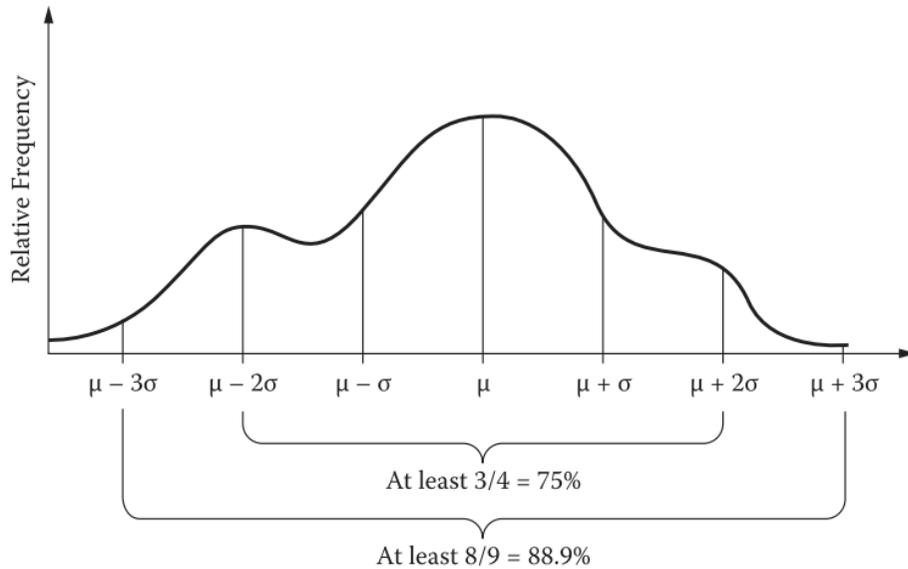


FIGURE 2.12b Chebyshev's Rule

Summary Statistics
Results
The MEANS Procedure

Analysis Variable : IRONORE					
Mean	Std Dev	Variance	Minimum	Maximum	N
65.7424359	0.6936098	0.4810946	62.7700000	66.8600000	390

FIGURE 2.13 SAS Descriptive Statistics for Iron Ore Contents

Stem-and-leaf of F-INDEX N = 18

Leaf Unit = 1.0

5	0	12234
7	0	68
(4)	1	0224
7	1	566
4	2	22
2	2	
2	3	03

FIGURE 2.14 MINITAB stem-and-leaf display for freckle index of alloys

Descriptive Statistics: Fatalities

Variable	N	Mean	StDev	Minimum	Q1	Median	Q3	Maximum	IQR
Fatalities	62	208.3	344.6	11.0	69.5	106.5	185.8	2500.0	116.3

FIGURE 2.15 MINITAB Descriptive Statistics for Number of Energy-Related Fatal Accidents

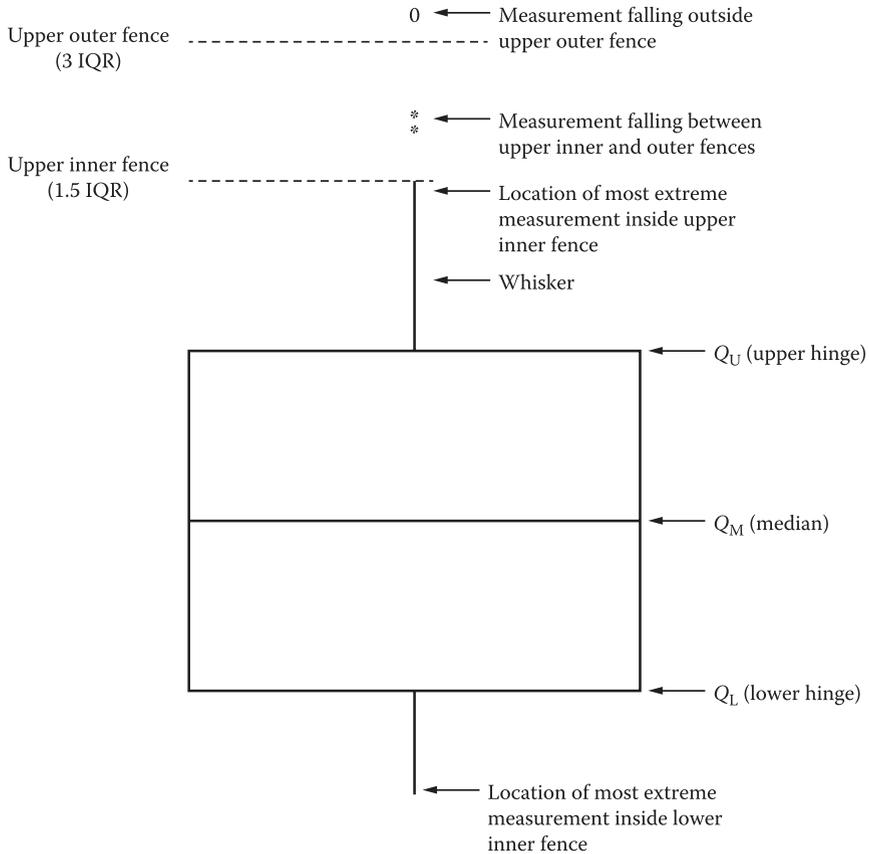


FIGURE 2.16 Key Elements of a Box Plot

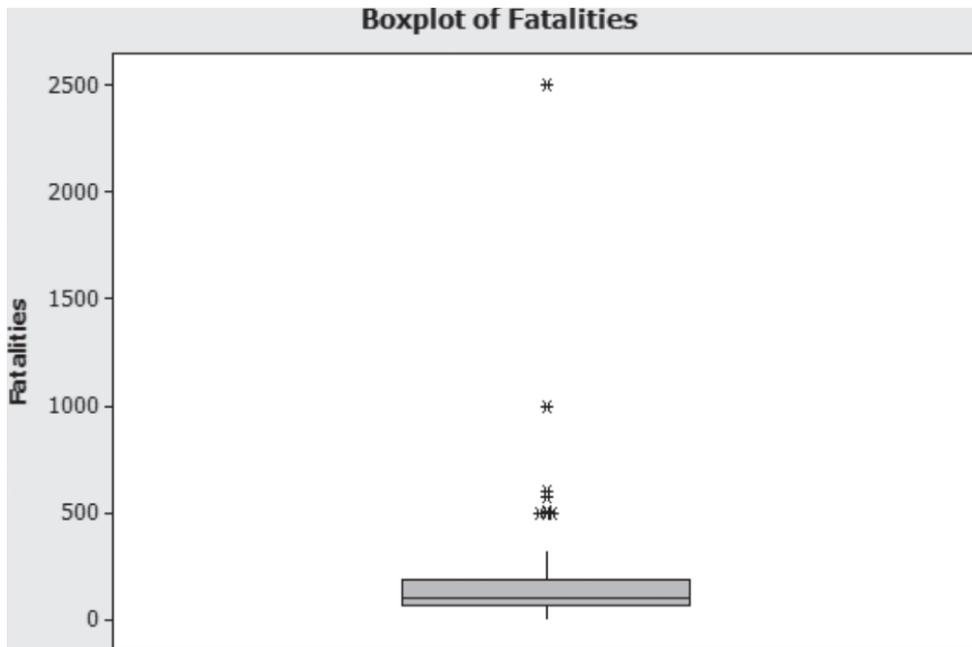


FIGURE 2.17 MINITAB Boxplot for Number of Energy-Related Fatal Accidents



FIGURE 2.18 MINITAB bar graph of vessel collisions by location

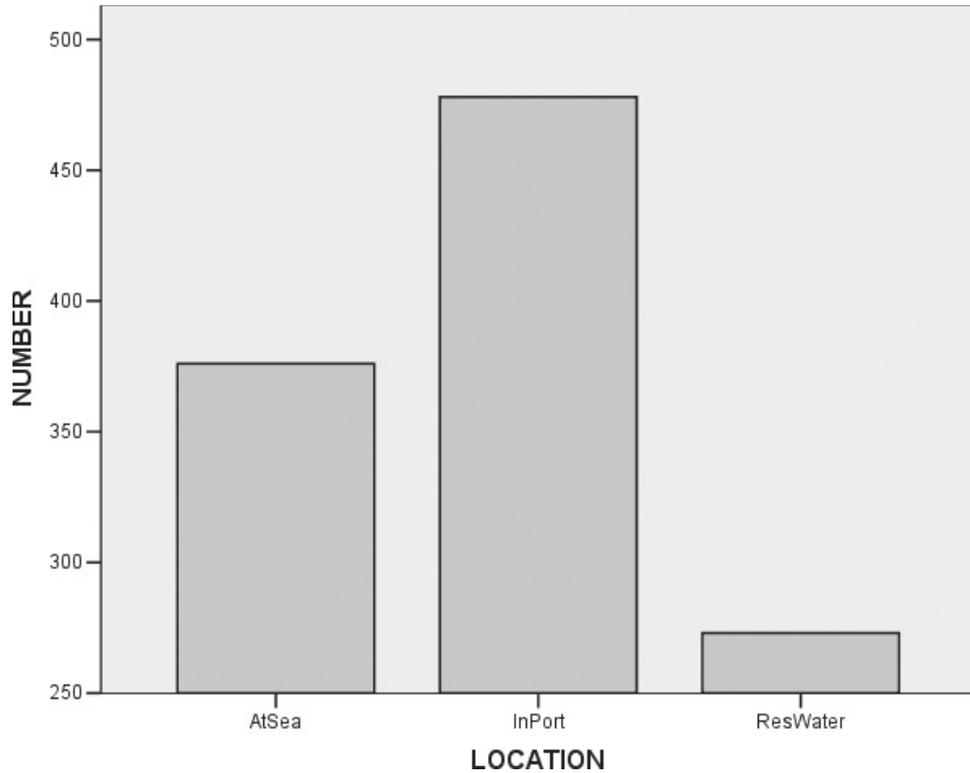


FIGURE 2.19 SPSS bar graph of vessel collisions by location—adjusted vertical axis

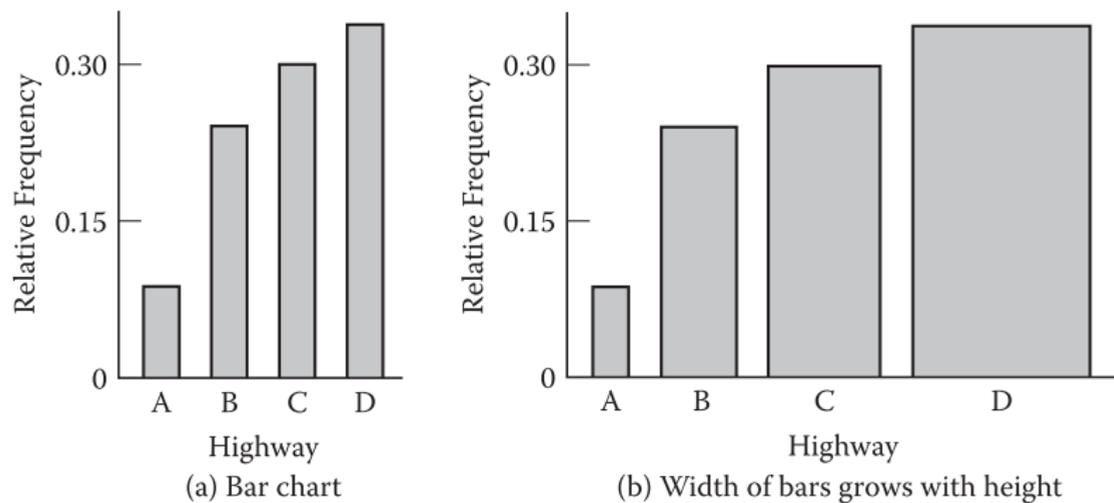


FIGURE 2.20 Relative frequency of fatal motor vehicle accidents on each of four major highways

Descriptive Statistics: Fatalities (All Data)

Variable	N	Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Fatalities	62	208.3	344.6	11.0	69.5	106.5	185.8	2500.0

Descriptive Statistics: Fatalities (1 Outlier Deleted)

Variable	N	Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Fatalities	61	170.8	178.2	11.0	69.0	105.0	179.5	1000.0

Descriptive Statistics: Fatalities (2 Outliers Deleted)

Variable	N	Mean	StDev	Minimum	Q1	Median	Q3	Maximum
Fatalities	60	156.9	142.9	11.0	68.5	103.0	176.3	600.0

FIGURE 2.21 MINITAB Descriptive Statistics for Number of Energy-Related Fatal Accidents

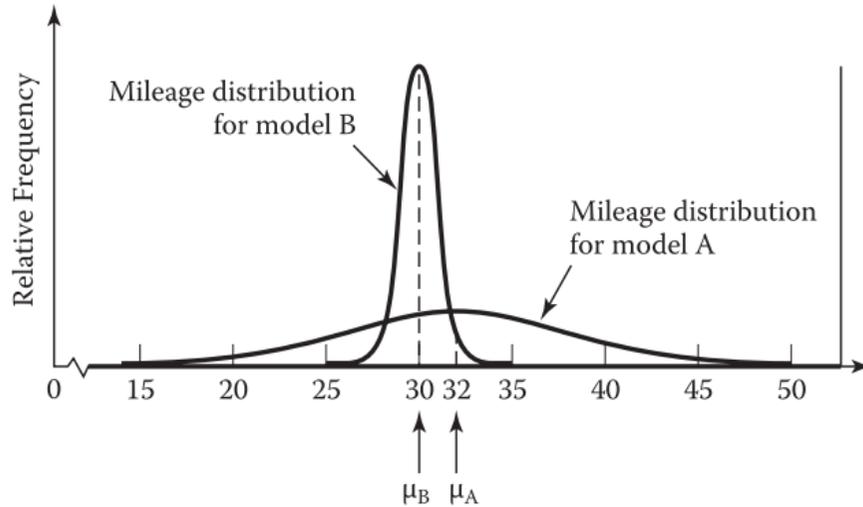


FIGURE 2.22 Mileage distributions for two car models

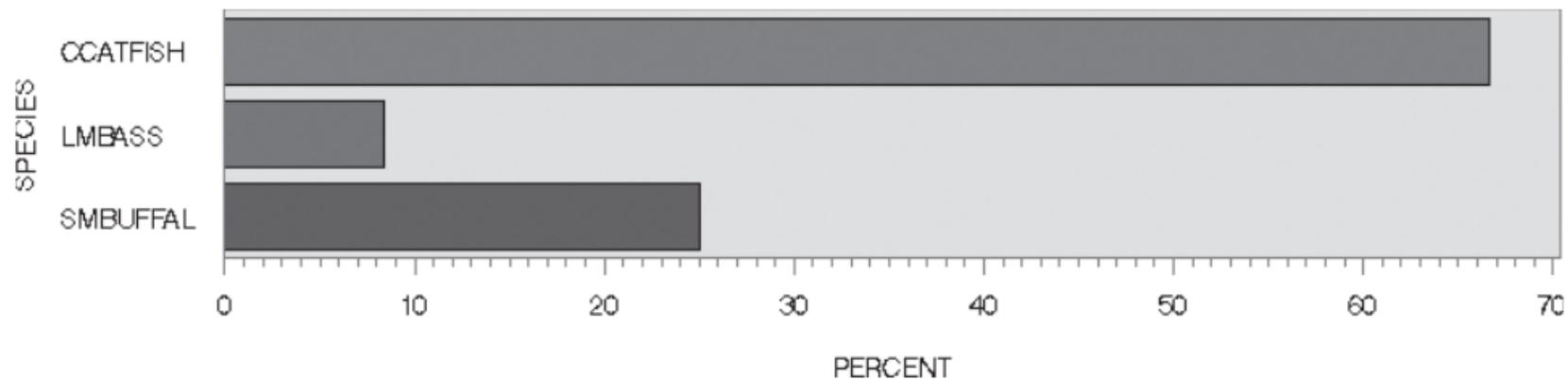


FIGURE SIA2.1 SAS horizontal bar graph for species of fish

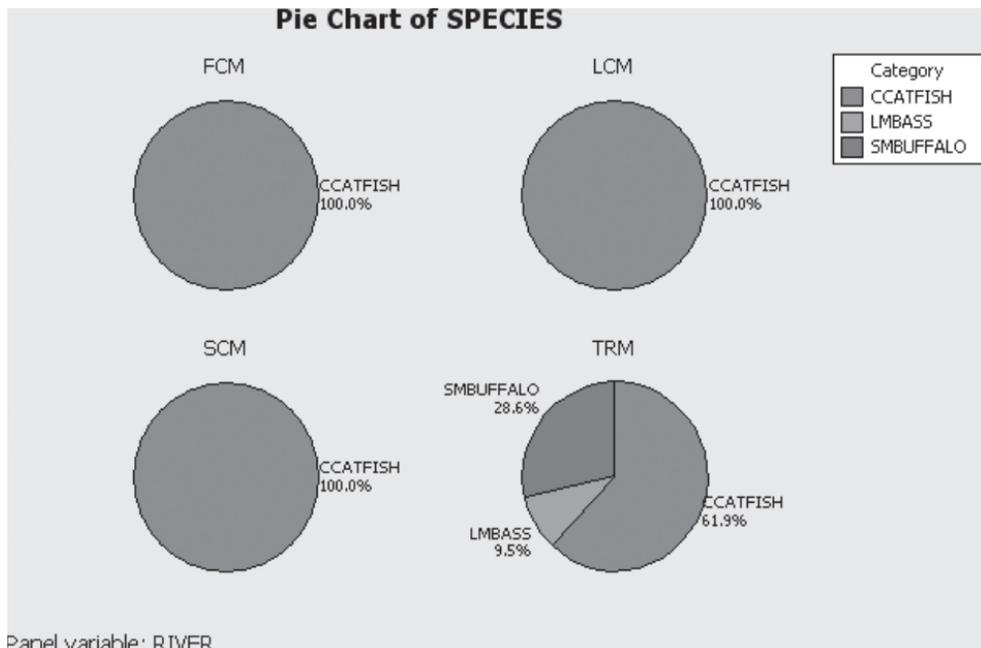


FIGURE SIA2.2 MINITAB pie charts of species by river

The MEANS Procedure

SPECIES	N Obs	Variable	Mean	Std Dev	Minimum	Maximum	Median
CCATFISH	96	LENGTH	44.7291667	4.5808047	29.5000000	52.0000000	45.0000000
		WEIGHT	987.2916667	262.6813926	353.0000000	1770.00	983.5000000
		DDT	33.2993750	119.4746053	0.7400000	1100.00	9.5500000
LMBASS	12	LENGTH	26.5416667	4.4795410	17.5000000	36.0000000	26.2500000
		WEIGHT	629.0000000	324.7564122	173.0000000	1433.00	538.0000000
		DDT	1.3800000	2.0426142	0.1100000	7.4000000	0.5300000
SMBUFFAL	36	LENGTH	43.1250000	5.4134423	32.5000000	52.0000000	46.0000000
		WEIGHT	1356.42	436.7343995	520.0000000	2302.00	1440.50
		DDT	8.1616667	11.2832608	0.2500000	48.0000000	4.6500000

FIGURE SIA2.3 SAS descriptive statistics by species of fish

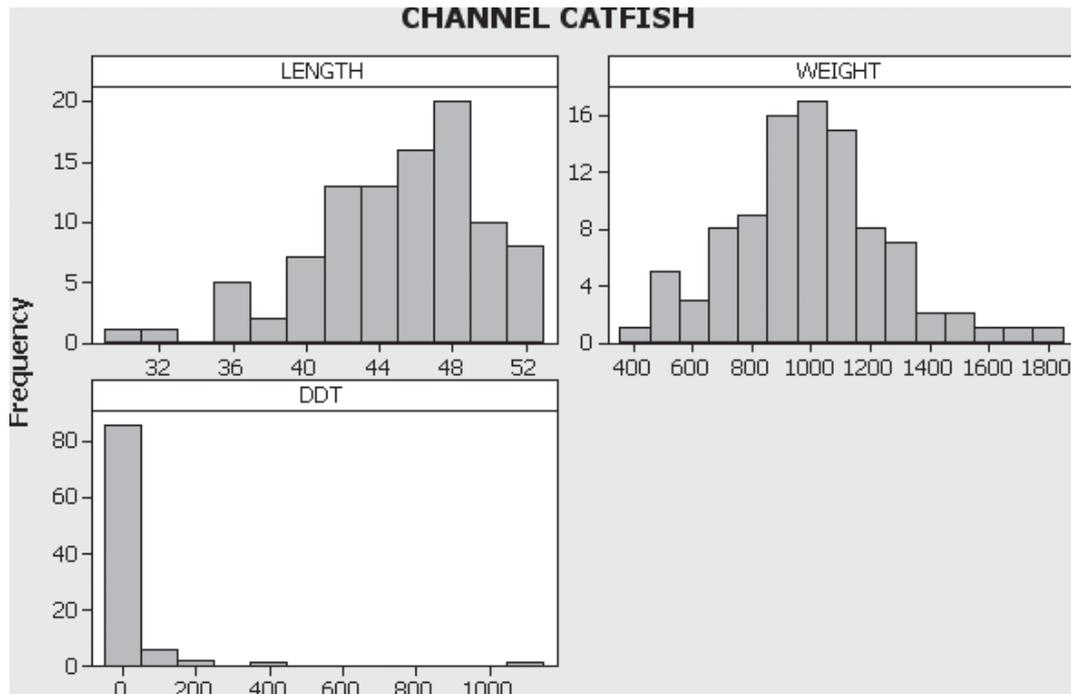


FIGURE SIA2.4 MINITAB histograms for channel catfish

Descriptive Statistics: DDT

Variable	N	Mean	StDev	Minimum	Median	Maximum
DDT	95	22.07	46.84	0.740	9.40	360.00

FIGURE SIA2.5 MINITAB summary statistics for DDT levels of channel catfish, outlier deleted

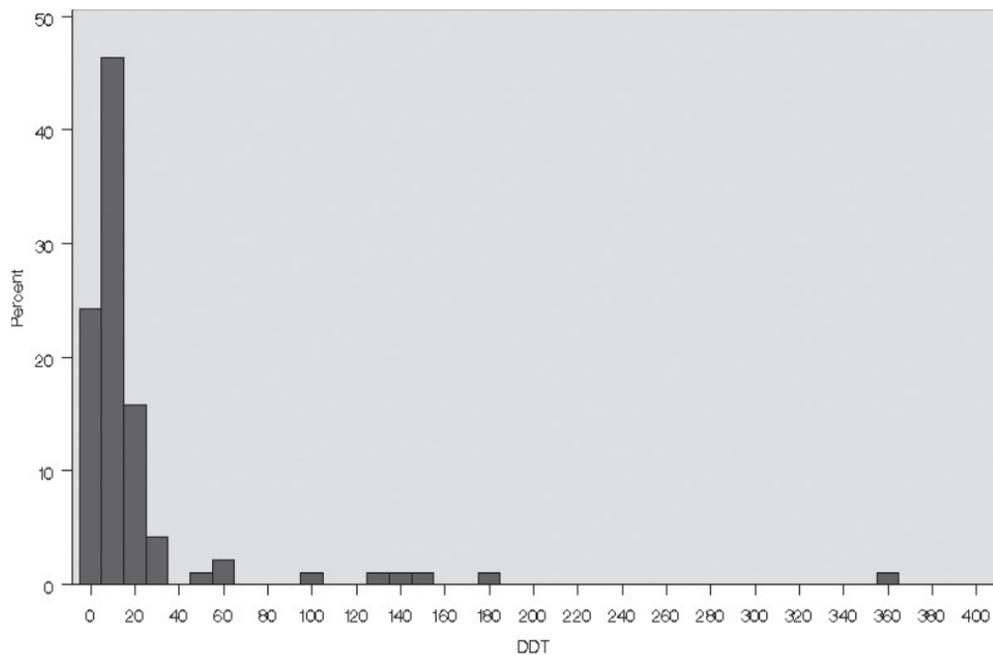


FIGURE SIA2.6 SAS histogram for DDT levels of channel catfish, outlier deleted