

coasters on each continent. Represent the data graphically, using a Pareto chart and a horizontal bar graph.

Africa	17
Asia	315
Australia	22
Europe	413
North America	643
South America	45

Source: www.redb.com

5. **World Energy Use** The following percentages indicate the source of energy used worldwide. Construct a Pareto chart and a vertical bar graph for the energy used.

Pareto

Petroleum	39.8%
Coal	23.2
Dry natural gas	22.4
Hydroelectric	7.0
Nuclear	6.4
Other (wind, solar, etc.)	1.2

Source: New York Times Almanac.

6. **Airline Departures** Draw a time series graph to represent the data for the number of airline departures (in millions) for the given years. Over the years, is the number of departures increasing, decreasing, or about the same?

Year	1996	1997	1998	1999	2000	2001	2002
Number of departures	7.9	9.9	10.5	10.9	11.0	9.8	10.1

Source: The World Almanac and Book of Facts.

7. **Average Global Temperatures** Represent these average global temperatures in a time series graph.

1900-09	56.5	1960-69	57.1
1910-19	56.6	1970-79	57.0
1920-29	56.7	1980-89	57.4
1930-39	57.0	1990-99	57.6
1940-49	57.1		
1950-59	57.1		

Source: World Almanac.

8. **Nuclear Power Reactors** Draw a time series graph for the data shown and comment on the trend. The data represent the number of active nuclear reactors.

Year	1992	1994	1996	1998	2000	2002
Number	109	109	109	104	104	104

Source: The World Almanac and Book of Facts.

9. **Percentage of Voters in Presidential Elections** Listed are the percentages of voters who voted in past Presidential elections since 1964. Illustrate the data with a time series graph. The day before the 2006 election, a website published a survey where 90% of the

Time series

respondents said they voted in the 2004 election. Give possible reasons for the discrepancy.

1964	95.83	1980	76.53	1996	65.97
1968	89.65	1984	74.63	2000	67.50
1972	79.85	1988	72.48	2004	64.0
1976	77.64	1992	78.04		

Source: New York Times Almanac.

10. **Reasons We Travel** The following data are based on a survey from American Travel Survey on why people travel. Construct a pie graph for the data and analyze the results.

Purpose	Number
Personal business	146
Visit friends or relatives	330
Work-related	225
Leisure	299

Source: USA TODAY.

11. **Characteristics of the Population 65 and Over** Two characteristics of the population aged 65 and over are shown below for 2004. Illustrate each characteristic with a pie graph.

Marital status	Educational attainment		
Never married	3.9%	Less than ninth grade	13.9%
Married	57.2	Completed 9-12 but no diploma	13.0
Widowed	30.8	H.S. graduate	36.0
Divorced	8.1	Some college/ associates degree	18.4
		Bachelor's/advanced degree	18.7

Source: New York Times Almanac.

12. **Components of the Earth's Crust** The following elements comprise the earth's crust, the outermost solid layer. Illustrate the composition of the earth's crust with a pie graph.

Oxygen	45.6%
Silicon	27.3
Aluminium	8.4
Iron	6.2
Calcium	4.7
Other	7.8

Source: New York Times Almanac.

13. **Workers Switch Jobs** In a recent survey, 3 in 10 people indicated that they are likely to leave their jobs when the economy improves. Of those surveyed, 34% indicated that they would make a career change, 29% want a new job in the same industry, 21% are going to start a business, and 16% are going to retire. Make a pie chart and a Pareto chart for the data. Which chart do you think better represents the data?

Source: National Survey Institute.