The Restless Earth

The table shows the number of major earthquakes around the world from 1900 through 1999.

1. Can you predict the number of earthquakes around the world next year?
2. Is it possible to quantify how accurate your prediction is likely to be?

In this chapter, you will develop the skills required to answer these questions as well as others involving statistical predictions. You will learn more about probability distributions, including continuous distributions. In particular, this chapter introduces the normal distribution, one of the most common and important probability distributions. Also, you will analyse statements about probabilities made in the media, statistical studies, and a wide variety of other applications.

Major Earthquakes (7.0 or Greater on the Richter Scale)					
Year	Frequency	Year	Frequency	Year	Frequency
1900	13	1934	22	1968	30
1901	14	1935	24	1969	27
1902	8	1936	21	1970	29
1903	10	1937	22	1971	23
1904	16	1938	26	1972	20
1905	26	1939	21	1973	16
1906	32	1940	23	1974	21
1907	27	1941	24	1975	21
1908	18	1942	27	1976	25
1909	32	1943	41	1977	16
1910	36	1944	31	1978	18
1911	24	1945	27	1979	15
1912	22	1946	35	1980	18
1913	23	1947	26	1981	14
1914	22	1948	28	1982	10
1915	18	1949	36	1983	15
1916	25	1950	39	1984	8
1917	21	1951	21	1985	15
1918	21	1952	17	1986	6
1919	14	1953	22	1987	11
1920	8	1954	17	1988	8
1921	11	1955	19	1989	7
1922	14	1956	15	1990	12
1923	23	1957	34	1991	11
1924	18	1958	10	1992	23
1925	17	1959	15	1993	16
1926	19	1960	22	1994	15
1927	20	1961	18	1995	25
1928	22	1962	15	1996	22
1929	19	1963	20	1997	20
1930	13	1964	15	1998	16
1931	26	1965	22	1999	23
1932	13	1966	19		
1933	14	1967	16		