Practice Problems

1. Ten babies were born the first day of the year. The birth weights of these New Year babies are listed below in ounces (16 ounces = 1 pound). Compute the range, mean, variance, and standard deviation of their birth weight.

84	138	145	117	99	114	102	149	92	106

2. A researcher conducted a study measuring extroversion of 18 participants described as "outgoing" by a friend. Extroversion was measured on a scale of 1 (low extroversion) to 7 (high extroversion). Compute the range, mean, variance, and standard deviation of these scores.

6	4	7	3	3	5	4	7	2
4	7	5	5	4	2	3	6	5

3. A researcher asked participants to estimate when a minute expired. Estimates were measured in seconds. The data are shown below. Compute the range, mean, variance, and standard deviation of these scores.

65	72	71	80	66	99	56	45	72
93	101	84	91	85	40	80	83	88
105	92	74	70	58	77	83	67	40

Refer to this research scenario to answer questions 4 through 8.

A survey of 20 social science students enrolled in an evening statistics course was conducted.   Survey questions included age, employment status, the number of hours worked per week, and the number of hours spent studying statistics per week. The data are shown in the table below.

Age											Hours Studied Statistics – All Students									
28	27	33	42	44	21	18	38	34	23		6	3	5	5	10	4	7	6	5	5
31	29	32	33	29	41	19	21	36	35		6	8	9	8	3	5	2	3	7	2

Employed Students & Number of Hours Worked							Employment Status and Hours Studied Statistic										
							Part-Time (<20 Hrs)						Full-Time (>20 Hrs)				
40	38	26	20	30	15	20	6	8	9	5	6		4	6	2	5	2
40	25	20	40	18	35	28	8						5	2	3	7	5
20	45																

4. Find the mean, range, variance, and standard deviation of the age data.

5. Find the mean, range, variance, and standard deviation for hours worked.

6. Find the mean, range, variance, and standard deviation for hours studied.

7. Find the mean, range, variance, and standard deviation for the hours studied for a) part-time students and b) full-time students.

8. A social psychologist (the parent of three teenagers) interested in the time it takes teenagers to detect the sound of a telephone ringing in a room busy with activity and noise, recruited twenty teenagers between 14 and 15 years of age to participate in a study. The psychologist obtained consent from the teenagers and their parents. For this study, the teenagers retyped a sample term paper, pushing a special button attached to the keyboard if and when they heard a phone ring in the room. The noise levels, sample paper, and other room conditions were held constant. The response times were measured in milliseconds and are shown below. Compute the mean, range, variance, and standard deviation.

6.3	5.4	2.1	.9	3.4	2.4	1.1	5.8	9.4	3.5
1.6	2.4	1.9	1.8	3.0	2.7	1.7	3.9	.7	2.2