HW1

1.9 The following table gives the number of dog bites reported to the police last year in six cities.

City	Number of Bites
Center City	47
Elm Grove	32
Franklin	51
Bay City	44
Oakdale	12
Sand Point	3

Briefly explain the meaning of a member, a variable, a measurement, and a data set with reference to this table.

1.9 With reference to this table, we have the following definitions:

- Member: Each city included in the table
- Variable: Number of dog bites reported last year
- Measurement: Number of dog bites in a specific city
- Data set: Collection of dog bite numbers for the six cities listed in the table.

1.10 The following table gives the state taxes (in dollars) on a pack of cigarettes for nine states as of April 1, 2009.

State	State Tax (in dollars)
Alaska	2.00
Iowa	1.36
Massachusetts	2.51
Missouri	.17
New Hampshire	1.33
New York	2.75
Ohio	1.25
South Carolina	.07
West Virginia	.55

Briefly explain the meaning of a member, a variable, a measurement, and a data set with reference to this table.

Member: All states included in the table
variable: State tax on a pack of cigarettes
measurement: State tax at specific state
Data set: collection of taxes for the nine states

1.11 Refer to the data set in Exercise 1.9.

a. What is the variable for this data set?

b. How many observations are in this data set?

c. How many elements does this data set contain?

1.11

a. Number of dog bites reported last year

b. Six

c. Six (cities)

1.12 Refer to the data set in Exercise 1.10.

a. What is the variable for this data set?

b. How many observations are in this data set?

c. How many elements does this data set contain?

a)variable: State tax on a pack of cigarette.

b) nine

c) nine

1.22 The following table lists five pairs of m and f values.

m	5	10	17	20	25
f	1	28	6	1	64

Compute the value of each of the following:

a. Σm **b.** Σf^2 **c.** Σmf **d.** $\Sigma m^2 f$

1.22

m	f	f^2	mf	m^2f
5	12	144	60	300
10	8	64	80	800
17	6	36	102	1734
20	16	256	320	6400
25	4	16	100	2500
$\Sigma m = 77$	$\Sigma f = 46$	$\Sigma f^2 = 516$	$\Sigma mf = 662$	$\Sigma m^2 f = 11{,}734$

1.23 The following table lists six pairs of m and f values.

m	3	6	25	12	15	18
f	16	11	16	8	4	14

Calculate the value of each of the following:

a. Σf **b.** Σm^2 **c.** Σmf **d.** $\Sigma m^2 f$

1.23

m	f	m^2	mf	m^2f
3	16	9	48	144
6	11	36	66	396
25	16	625	400	10,000
12	8	144	96	1152
15	4	225	60	900
18	14	324	252	4536
$\Sigma m = 79$	$\Sigma f = 69$	$\Sigma m^2 = 1363$	$\Sigma mf = 922$	$\Sigma m^2 f = 17{,}128$