

1. After graduation ceremonies at a university, six graduates were asked whether they were in favor of (identified by 1) or against (identified by 0) abortion. Some information about these graduates is shown below.

Graduate	Sex	Age	Abortion Issue	Class Rank
Nancy	F	52	1	1
Michael	M	24	1	2
Tammy	F	33	0	4
Edward	M	38	0	20
Jennifer	F	25	1	3
Tim	M	19	0	8

- How many elements are in the data set?
 - How many variables are in the data set?
 - How many observations are in the data set?
 - Which of the above variables (Sex, Age, Abortion Issue, Class rank) are qualitative and which are quantitative variables?
 - Are arithmetic operations appropriate for the variable "abortion issue"?
2. Thirty students in the School of Business were asked what their majors were. The following represents their responses (M = Management; A = Accounting; E = Economics; O = Others).

A	M	M	A	M	M	E	M	O	A
E	E	M	A	O	E	M	A	M	A
M	A	O	A	M	E	E	M	A	M

- Construct a frequency distribution and a bar graph.
- Construct a relative frequency distribution and a pie chart.

3. The hourly wages of a **sample** of eight individuals is given below.

Individual	Hourly Wage (dollars)
A	27
B	25
C	20
D	10
E	12
F	14
G	17
H	19

For the above **sample**, determine the following measures:

- The mean.
 - The standard deviation.
 - The 25th percentile.
4. In 2002, the average age of students at UTC was 22 with a standard deviation of 3.96. In 2003, the average age was 24 with a standard deviation of 4.08. In which year do the ages show a more dispersed distribution? Show your complete work and support your answer.
5. Consider the data in the following frequency distribution. Assume the data represent a population.

Class	Frequency
2 - 6	2
7 - 11	3
12 - 16	4
17 - 21	1

For the above data, compute the following.

- The mean
- The variance
- The standard deviation