

**Statistics**  
**8/21 Subwork**  
**Chapter 1 & 2 Practice**

For each problem, identify the W's and population of interest. When identifying the variables, state whether they are Quantitative (Q) or Categorical (C).

1.

A June 2011 Gallup Poll asked Americans, "Thinking about the job situation in America today, would you say that it is now a good time or bad time to find a quality job?" The choices were "Good time" or "Bad time."

Who:

What:

When:

Where:

Why:

How:

Population of Interest:

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2.

Some companies offer 401(k) retirement plans to employees, permitting them to shift part of their before-tax salaries into investments such as mutual funds. Employers typically match 50% of the employees' contribution up to about 6% of salary. One company concerned with what it believed was a low employee participation rate in its 401(k) plan, sampled 30 other companies with similar plans and asked for their 401(k) participation rates.

Who:

What:

When:

Where:

Why:

How:

Population of Interest:

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3.

The State Education Department requires local school districts to keep these records on all students: age, race or ethnicity, days absent, current grade level, standardized test scores in reading and mathematics, and any disabilities or special educational needs

Who:

What:

When:

Where:

Why:

How:

Population of Interest:

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4.

Business analysts hoping to provide information helpful to American grape growers compiled these data about vineyards: size (acres), number of years in existence, state, varieties of grapes grown, average case price, gross sales, and percent profit.

Who:

What:

When:

Where:

Why:

How:

Population of Interest:

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Use the tables to determine each distribution. Write distributions as fractions. Use the example below to help you understand marginal distributions.

**Example #1**

What is the marginal distribution for females?

$$\frac{135}{180} \quad \frac{45}{180}$$

	Sport Utility Vehicle (SUV)	Sports Car	Totals
male	21	39	60
female	135	45	180
Totals	156	84	240

**Example #2**

What is the marginal distribution for Sports Cars?

$$\frac{39}{84}$$

$$\frac{45}{84}$$

	Sport Utility Vehicle (SUV)	Sports Car	Totals
male	21	39	60
female	135	45	180
Totals	156	84	240

5.
  - a. What percent of people surveyed prefer football?
  - b. What percent of people surveyed were female?
  - c. What percent of people surveyed were males that prefer baseball?
  - d. What is the marginal distribution for Basketball?

What is your favorite sport to watch on television?			
	Football	Basketball	Baseball
Males	40	22	15
Females	12	16	45
Total	52	38	60

6.
  - a. What percent of sales were from people who bought Hot Dogs?
  - b. What percent of sales came from people who didn't buy a drink?
  - c. What percent of people bought Pizza and soda?
  - d. What is the marginal distribution for people that did not buy food items?

Concession Stand Sales				
	Soda	Water	No Drink	Total
Hot Dog	50	62	46	158
Pizza	120	58	4	182
No Food	30	20	10	60
Total	200	140	60	400

7.
  - a. What is the marginal distribution for Females?
  - b. What is the marginal distribution for people that did NOT participate in after school sports program?

	Participate in an After-School Sports Program	Do Not Participate in an After-School Sports Program	Total
Female	232	348	580
Male	168	252	420
Total	400	600	1,000