

## 1.1 WS

1. What variables are measured? Identify each as categorical or quantitative. In what units were the quantitative variables measured?

State	Number of Family Members	Age	Gender	Marital Status	Total Income	Travel time to work
Kentucky	2	61	Female	Married	21000	20
Florida	6	27	Female	Married	21300	20
Wisconsin	2	27	Male	Married	30000	5
California	4	33	Female	Married	26000	10
Michigan	3	49	Female	Married	15100	25
Virginia	3	26	Female	Married	25000	15
Pennsylvania	4	44	Male	Married	43000	10
Virginia	4	22	Male	Never married/ single	3000	0
California	1	30	Male	Never married/ single	40000	15
New York	4	34	Female	Separated	30000	40

2. A sample of 200 children from the United Kingdom ages 9-17 was selected from the CensusAtSchool website ([www.censusatschool.com](http://www.censusatschool.com)). The gender of each student was recorded along with which super power they would most like to have: invisibility, super strength, telepathy (ability to read minds), ability to fly, or ability to freeze time. Here are the results:

	Female	Male	Total
Invisibility	17	13	30
Super Strength	3	17	20
Telepathy	39	5	44
Fly	36	18	54
Freeze Time	20	32	52
Total	115	85	200

- What proportion of males want the power of invisibility?
- What proportion of females want the power of freeze time?
- What proportion of children that want the power of telepathy are male?
- What proportion of children that want the power of fly are female?

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3. Create a well labeled segmented bar graph of the marginal distributions of power preference and gender. Be sure to include a key.

Female:

Males:

Key:

4. Based on the graphs above, can we conclude that boys and girls differ in their preference of superpower? Give appropriate evidence to support your answer.