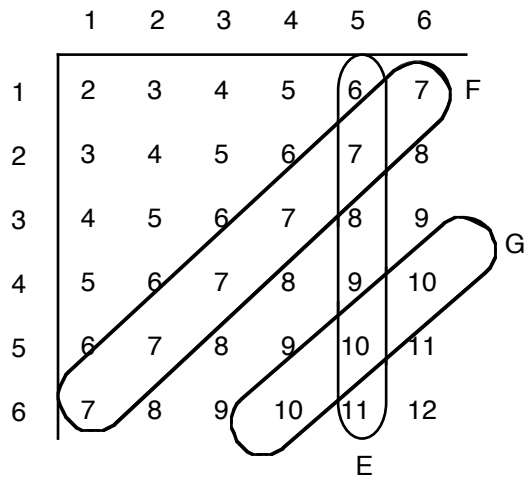


**Answers to Review Problems for Test #1**

I do not show my work. You would need to show your work to get full credit on the exam.

- (1) this two-stage sampling procedure involves large-household bias: individuals in large households are less likely to be chosen.
- (2) mode: 120; median: 100; mean: 98; range: 140; standard deviation: 30
- (3) Justice: .278 as compared to Van Slyke's .261
- (4) 98%
- (5) 0.00022%
- (6) set up a Venn diagram as follows:



now can see that:

a.  $\Pr(F|E) = \frac{1}{6} = \Pr(F)$

b.  $\Pr(G|E) = \frac{1}{6} \neq \frac{1}{12} = \Pr(G)$

c. The verbal conclusion is correct, based on the answers to a. and b.

(7) 72.4%

(8) 99.6%

(9) 5.5%

(10) a. 1.54, 1.44, 1.32; happiness decreases with age

b. -0.15