

Probability Models

- contingency tables \rightarrow frequencies of multiple categories

- conditional probability \rightarrow probability of an event occurring provided another event came before it

$\hookrightarrow P(B|A) \Rightarrow$ probability of B given that A has occurred

EX \rightarrow

	Support	No Support	Totals
Dem	24	36	60
Rep	27	33	60
Totals	51	69	120

$$P(\text{Rep}) = \frac{60}{120} = \frac{1}{2}$$

$$P(\text{No Support}) = \frac{69}{120} = \frac{23}{40}$$

$$P(\text{Support} | \text{Dem}) = \frac{24}{60} = \frac{2}{5}$$

$$P(\text{Dem} | \text{No Support}) = \frac{36}{69} = \frac{12}{23}$$

$$P(\text{No Support} | \text{Rep})$$

$$= \frac{33}{60}$$

$$= \frac{11}{20}$$

$$P(\text{Dem} | \text{Support})$$

$$= \frac{24}{51} = \frac{8}{17}$$

HW: p. 853 → 6-18, 20, 22