

1. 50% P(LF Chicken Sandwich)
 40% P(LF Chicken Sandwich and Losing weight)

$$P(\text{Losing weight} | \text{LF Chicken Sandwich}) = \frac{P(\text{Losing weight and LF Chicken})}{P(\text{LF Chicken})}$$

$$= \frac{0.40}{0.50} = 0.8 = 80\%$$

2. P(Football card and Basketball card) = P(Football) · P(Basketball)

INDEPENDENT (Replacing the card) = $\frac{7}{10} \cdot \frac{3}{10} = \frac{21}{100} = 21\%$

3. P(A and B) = P(A) · P(B|A)

$$= \frac{5}{12} \cdot \frac{7}{11} = 0.265 \approx 26.5\%$$

4. P(left-handed | female) = $\frac{P(\text{LH and F})}{P(\text{F})} = \frac{6}{42} = \frac{1}{7}$

	LH	RH	T
M	2	35	37
F	6	36	42
T	8	71	79

5. P(Industry | Female) = $\frac{P(\text{Ind and F})}{P(\text{Female})} = \frac{8,004,000}{66,033,000} = 0.1212 \approx 12.1\%$

	Ag	Industry	Services	T
M	3,132,000	25,056,000	50,112,000	
F	6,677,000	8,004,000	57,362,000	66,033,000
T				

6. $P(A) = ?$ When independent, $P(A \text{ and } B) = P(A) \cdot P(B)$

$P(B) = 0.3$

$P(A \text{ and } B) = 0.06$

$$\frac{0.06}{0.3} = \frac{P(A) \cdot 0.3}{0.3}$$

$$0.2 = P(A)$$

7. $P(A) = 0.43$ $P(B|A) = 0.89$ $P(A \text{ and } B) = ?$

$P(A \text{ and } B) = P(A) \cdot P(B|A) = 0.43 \cdot 0.89 \approx 0.383$

8. Spinner #1-8

$P(\text{less than 4 or greater than 7}) = \frac{3}{8} + \frac{1}{8} = \frac{4}{8} = \frac{1}{2}$

Mutually exclusive

9. 4 R 4 Gr. 5 Bl

$P(\text{Bl and Gr}) = P(\text{Bl}) \cdot P(\text{Gr}|\text{Bl})$

$= \frac{5}{13} \cdot \frac{4}{12} = \frac{20}{156} \approx 0.1282 \approx 12.8\%$

10. URN #1

3 W 6 Y

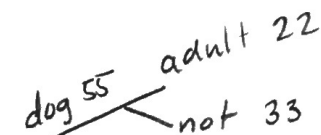
URN #2

3 W 8 Y

$P(2 \text{ whites}) = \frac{3}{9} \cdot \frac{3}{11} = \frac{9}{99} \approx 0.0909 \approx 9.1\%$

independent

11.



40% of 55 get adult dog

$0.40 \cdot 55 = 22$

25% of 45 get other adult pet

$0.25 \times 45 = 11.25$

33.25 adopt adult pets altogether