AP Statistics

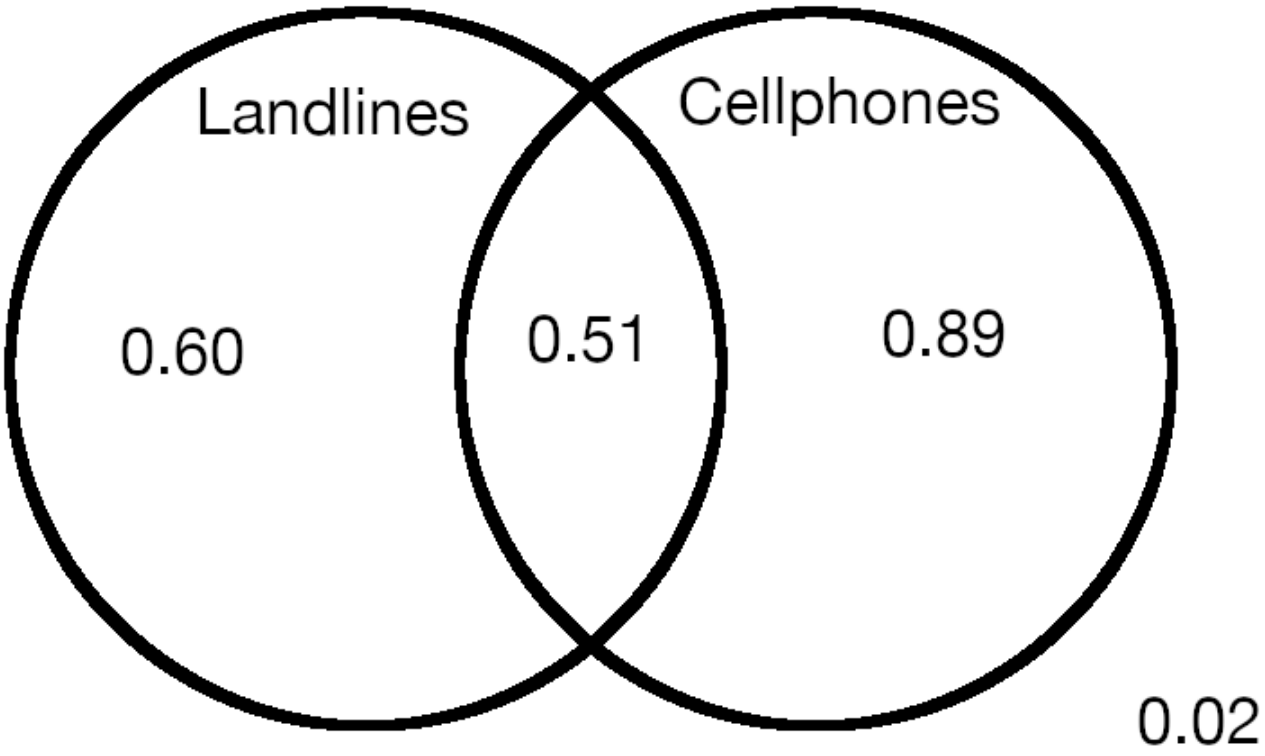
2019-01-30 Noah Overcash

5.2 Practice

- Question 1
  - Part A

	Cell Phone	No Cell Phone	Total
Landline	0.51	0.09	**0.6**
No Landline	0.38	0.02	**0.4**
Total	**0.89**	**0.11**	**1**

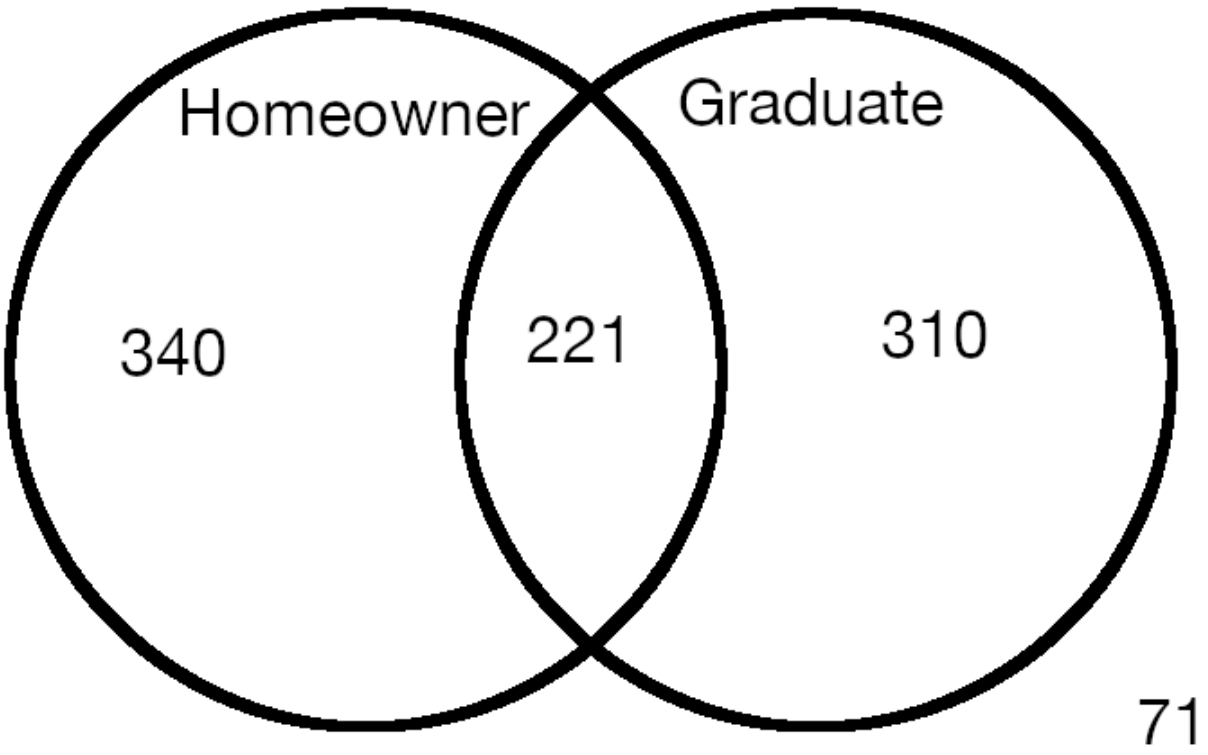
  - Part B



- Part C
  - F(L OR C) = 0.60 + 0.89 - 0.51 = 0.98
- Part D
  - F(C ONLY) = 0.89 - 0.51 = 0.38
- Part E
  - F(L U C) = 0.98

- Question 2
  - Part A

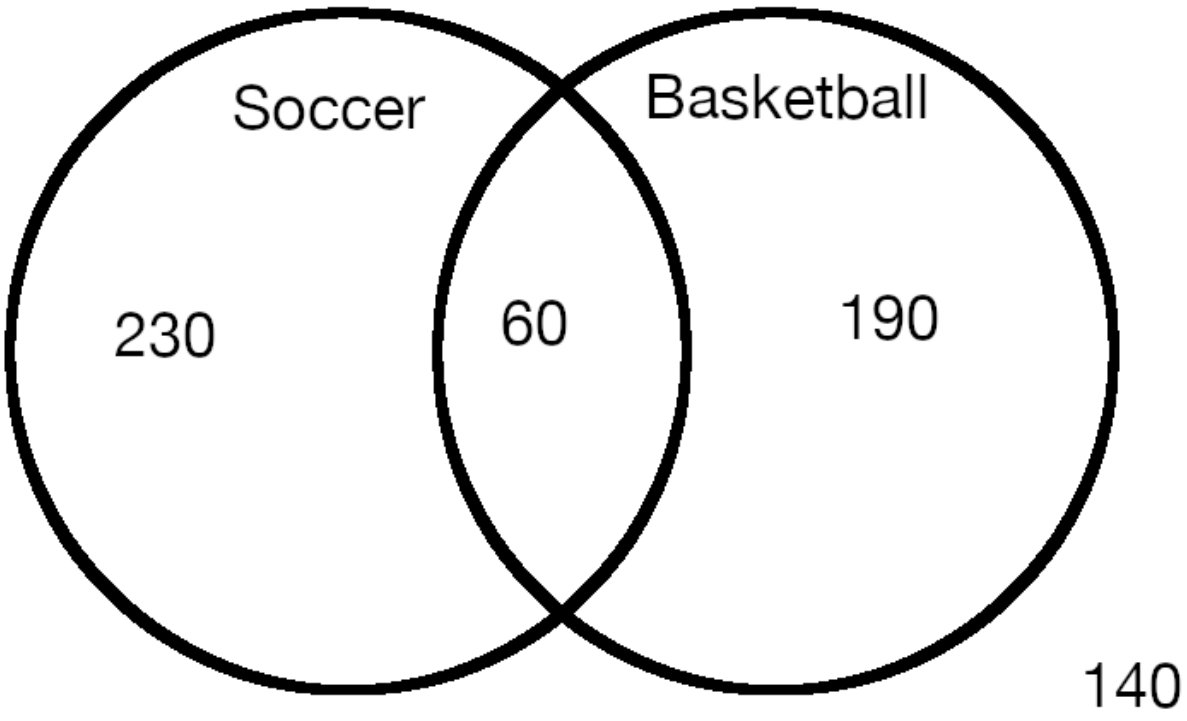
	Graduate	Not Graduate	Total
Homeowner	221	119	**340**
Not Homeowner	89	71	**160**
Total	**310**	**190**	**500**



- Part B
  - P(H) = 340/500 = 0.68
- Part C
  - P(G ∩ H) = 221/500 = 0.442
- Part D
  - P(G ∪ H) = 310 + 340 - 221 = 429

- Question 3

	Soccer Players	Not Soccer Players	Total
Basketball Players	60	130	**190**
Not Basketball Players	170	140	**310**
Total	**230**	**270**	**500**

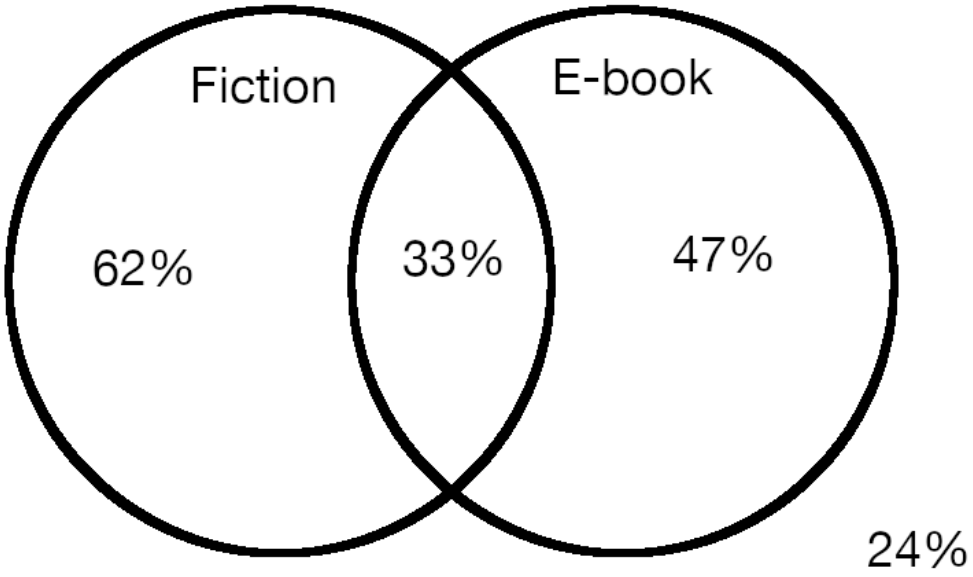


- Part B
  - P(S ∩ B) = 60

- Part C
  - $P(S \cup B) = 230 + 190 - 60 = 360$
- Part D
  - $P(S^C \cap B^C) = 500 - 360 = 140$

- Question 4
  - Part A

	Fiction	Not Fiction	Total
E-books	33%	14%	**47%**
Not E-books	29%	24%	**53%**
Total	**62%**	**38%**	**100%**

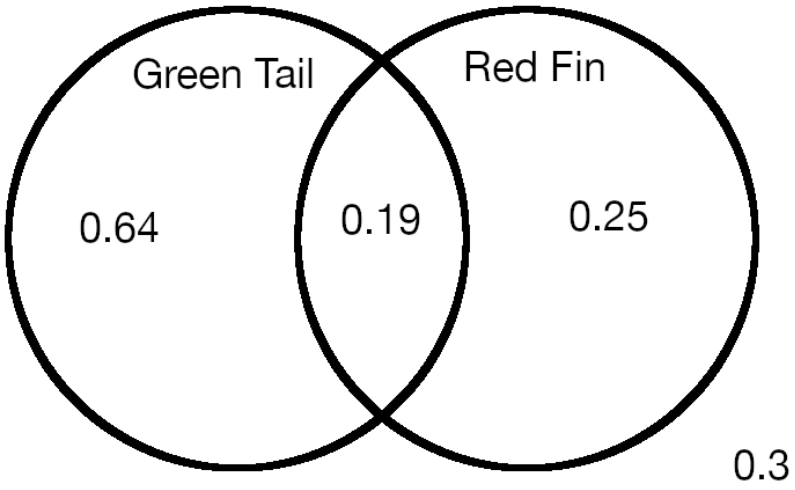


- Part B
  - $P(F \text{ and } E) = 33\% = 0.33$
- Part C
  - $P(F \text{ and } E) = P(F \cap E) = 0.33$

- Part D
  - $P(F^c \text{ and } E^c) = 24\%$
- Part E
  - $P(F^c \text{ and } E^c) = P(F^c \cap E^c) = 24$

- Question 5
  - Part A

	Green Tail	Not Green Tail	Total
Red Fin	0.19	0.06	**0.25**
Not Red Fin	0.45	0.3	**0.75**
Total	**0.64**	**0.36**	**1**



  - Part B
    - $P(G \cap R^c) = 0.45$
  - Part C
    - $P(G^c \cap R) = 0.06$
  - Part D
    - $P(G \cup R) = 0.7$