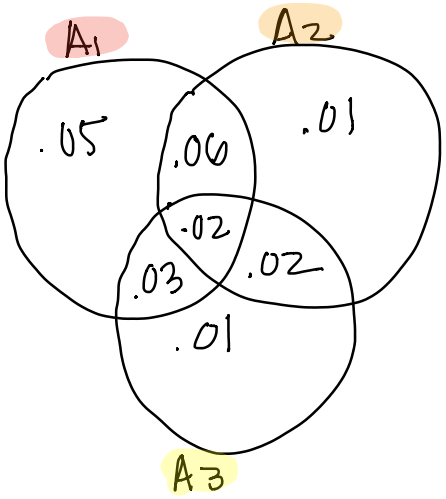
tangible pop:
conceptual pop:
enumerative study:
analytic study
at least = number + above
at most = num + below
sample mean μ
sample median
sample variance = $\frac{(\text{each value} - \text{mean})^2 + (\text{next value})\ldots}{n-1} = s^2$
sample deviation = $\sqrt{s^2}$

4.4, 16.4, 21.0, 30.0, 33.1, 36.6, 40.4, 66.7, 72.6, 81.5, 110.0
25.5 69.65

put on cheat sheet



.16 + .11 = .24 − .19 = .05 − .02 = .03

.16 + .08 = .24 − .19 = .05 − .02 = .03

.11 + .08 = .19 − .15 = .04 − .02 = .02

8a) $\binom{22}{5}$ $\frac{22!}{5!17!} = 26,334$

9 - D
7 - S
6 - G

8b) 5 from day

$\frac{5/9}{5/22}$ $\frac{\frac{9!}{5!4!}}{\frac{22!}{5!17!}}$ $\frac{126}{26334} = .00478469$

c) $\frac{5/9}{5/22} \cup \frac{5/7}{5/22} \cup \frac{5/6}{5/22}$ $= .00580998$

.00478469 $\frac{21}{26334}$ .00079745 $\frac{6}{26334}$ .0002278 4

d) $\frac{3/9 + 2/7}{26334}$ $\frac{X \text{ 21cw}}{26334} = .0675$

f) $\frac{2/9 + 2/7 + 1/6}{26334}$ $\frac{36 * 21 \times 6}{26334} = .17224880$

#9 a) $\frac{10!}{6!4!}$

b) $\frac{6/10}{6/24}$ $\frac{\frac{10!}{6!4!}}{\frac{24!}{6!18!}}$ $\frac{210}{13459} = 0.01156022$

10 - D
8 - S
6 - G
= 24

c) $\frac{6}{10} + \frac{6}{9} + \frac{6}{6}$ $\frac{210}{13459} + \frac{28}{''} + \frac{6}{''} = .01812913$

$6/24 = 13459$

d) $P(A) + P(B) + P(C) - P(A \cap B) - P(B \cap C) - P(A \cap C) + P(A \cap B \cap C)$
$P(A \cup B \cup C)$

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22 lightbulbs 10a) $\frac{2/6 * 1/16}{3/22}$ $\frac{15 * 16}{1540} = 0.15584416$

7 - 13
9 - 18
6 - 23

b) $\frac{3/7}{3/22} + \frac{3/9}{3/22} + \frac{3/16}{3/22}$

$\frac{35 + 84 + 20}{1,540} = .0902597\overline{4}$

c) $\frac{7 * 9 * 6}{1540} = 0.2\overline{45}$

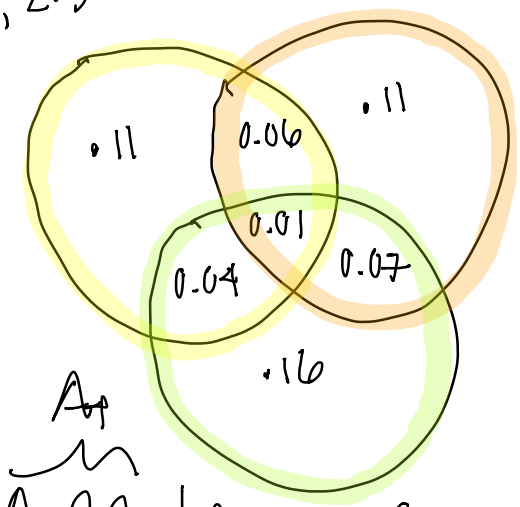
d) $1 - P(1) - P(2) - P(3) - P(4) - P(5)$

$1 - \frac{1/16}{1/22} - \frac{2/16}{2/22} - \frac{3/16}{3/22} - \frac{4/16}{4/22} - \frac{5/16}{5/22}$??

$1 - \left(\frac{16}{22} - \frac{120}{462} - \frac{560}{1540} - \frac{1820}{7,315} - \frac{43608}{26334}\right)$

2.4, 2.5

a)



$P(A_2|A_1)$ $\frac{P(A_1 \cap A_2)}{P(A_1)}$

$\frac{0.07}{.22} = 0.3\overline{18}$

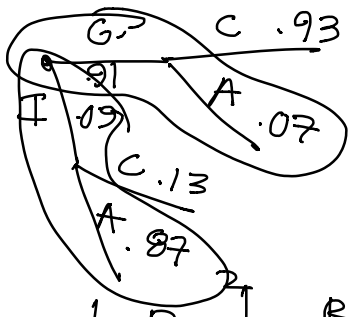
b) A_1

$A_2 \cap A_3 | A_1$ $\frac{P(A_1 \cap (A_2 \cap A_3))}{P(A_1)}$ $\frac{0.01}{.22} = .045\overline{4}$

c) $P(A_2 \cup A_3 | A_1)$ $\frac{P(A_1 \cap (A_2 \cup A_3))}{P(A_1)}$

d) $P(A_1 \cap A_2 \cap A_3 | A_1 \cup A_2 \cup A_3)$

$\frac{P(A_1 \cup A_2 \cup A_3 \cap (A_1 \cap A_2 \cap A_3))}{P(A_1 \cap A_2 \cap A_3)}$

2) 

$P(G|A)$ $\frac{P(A \cap G)}{P(A)} = \frac{.0637}{.1420} = .44859155\ldots$

3)

	D	R
D	54	36
R	6	4

$90C_{54}$

Standard deviation #8 d) $V(X) = E(X^2) - (E(X))^2$

$(X-\mu)^2$ $\int (X-1.5)^2 dx$ $\left[\frac{X^3}{3} - \frac{3X^2}{2} + 2.25X\right]$

x	x^2	$-1.5x$	$\int x^2 - 3x + 2.25$
-1.5	$-1.5x$	2.25	

practice $\int \frac{6}{X^7}$ $6X^{-7}$ $\frac{6X^{-6}}{-6}$ $-\frac{1}{X^6}$ $-\frac{1}{1^6}\Big]_2^0$ $1/64$

$E(X) = \int x\frac{2x}{25}$ $\frac{2x^2}{25}$ $\frac{2x^3}{75}\Big]_5^0$

$V(X) = E(X^2) - [E(X)]^2$

$\int x^2 \frac{2x}{25} = \frac{2x^3}{25} = \frac{2x^4}{100}$ $12.5 - \frac{10}{3}$ $9.1\overline{6}$