2.1 4.4 2.7 32.3 9.9
9.0 7.0 6.6 3.9 1.6

2.2.10

1.28 2.39 1.50 1.88 1.51

a. $2.39 - 1.28 = 1.11$ $\frac{1.11}{4} = .28$

b. 1.712

$s^2 = \frac{\Sigma (x_i - \bar{x})^2}{n-1}$

x_i	$x_i - \bar{x}$	$(x_i - \bar{x})^2$
1.28	$1.28 - 1.712$	$(-.432)^2 = .187$
2.39	$2.39 - 1.712$	
1.50	:	
1.88	:	
1.51	:	

$s^2 = .180$

$s = .44$

2.3.6 $\mu = 50$ $s = 10$

between 40 & 60

$\mu \pm ks = [\quad]$ $k=2$

$50 \pm 2 \cdot 10 = [40, 60]$ $1 - \frac{1}{k^2} = .75$

$50 - 2 \cdot 10 = 40$

$-2 \cdot 10 = -20$

$-10 \quad -10$

$k = 1$

4.1.13 $S = \{E_1, E_2, E_3, E_4\}$

13. $A = \{E_1, E_2\}$ $B = \{E_2, E_3\}$

$A \cap B = A \cap B = E_2$

$A \cup B = \{E_1, E_2, E_3\}$

$B^c = \{E_1, E_4\}$

14. $A = \{E_1, E_4\}$ $B = \{E_2, E_3, E_4\}$

$A \cap B = \{E_4\}$

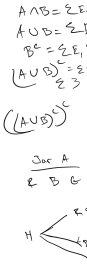
$A \cup B = \{E_1, E_2, E_3, E_4\}$

$B^c = \{E_1, E_3\}$

$(A \cup B)^c = \{E_3\}$

$\{E_3\}$ $E\emptyset$

$(A \cup B)^c$



A = I get orange

B = friend gets red

$P(A \cup B) = P(A) + P(B) - P(A \cap B)$

$= 2/12 + 3/12 - 1/12 = 5/12$

$P(A|H) = \frac{P(A \cap H)}{P(H)} = \frac{0}{1/2} = 0$

$P(A|H^c) = \frac{P(A \cap H^c)}{P(H^c)} = \frac{2/12}{1/2} = \frac{2}{12} \cdot 2$

$= \frac{2}{6} = 1/3$

$P(A \cup B) = P(A) + P(B) - P(A \cap B)$

ME $P(A) + P(B)$

Ind $= P(A) + P(B) - P(A)P(B)$

$P(A \cap B) = P(A)P(B|A) = P(B)P(A|B)$

ME $0 = P(A) \cdot 0 = P(B)$ 0

Ind $= P(A)P(B) = P(B)P(A)$

$P(B|A) = P(B) = P(B|A^c)$

$P(A) P(B|A) = P(B) P(A \cap B)$

$P(B|A) = \frac{P(B) P(A \cap B)}{P(A)}$

$P(A) = P(B) P(A \cap B) + P(B^c) P(A \cap B^c)$

$P(S_1) P(A|S_1) + P(S_2) P(A|S_2) + P(S_3) P(A|S_3)$

S_1 = Blue

S_2 = Bus

S_3 = Subway