3.2

Nasser Alrosti

$$P(B) = \frac{5}{14} \qquad P(B) = P(A_1) P(B|A_1) + P(A_2) P(B|A_2) + P(A_3) P(B|A_3)$$

$$P(A_2) = \frac{5}{14} \qquad \frac{5}{14} = \left(\frac{5}{14}\right) \left(\frac{2}{4}\right) + \left(\frac{5}{14}\right) \left(\frac{1}{5}\right) + \left(\frac{5}{14}\right) \left(\frac{2}{5}\right)$$

$$P(A_3) = \frac{5}{14} \qquad \frac{5}{14} = \frac{2}{14} + \frac{1}{14} + \frac{2}{14}$$

$$P(B|A_1) = \frac{2}{14} \qquad \frac{1}{14} = \frac{2}{14} + \frac{1}{14} + \frac{2}{14}$$

$$P(B|A_3) = \frac{2}{5} \qquad \frac{5}{15} = \frac{1}{15} \qquad both Side equal$$

$$P(B|A_3) = \frac{2}{5} \qquad \frac{5}{15} = \frac{1}{15} \qquad both Side equal$$

$$P(B) = P(B|A_1) + P(B|A_2) + P(B|A_3)$$

$$P(B) = P(A_1) P(B|A_1) + P(A_1) P(B|A_2) + P(A_2) P(B|A_3)$$

$$P(B) = P(A_1) P(B|A_1) + P(A_2) P(B|A_3)$$

$$P(B) = P(A_1) P(B|A_2) + P(A_2) P(B|A_3)$$

 $P(S) = P(S(IA_i) + P(B/IA_i) + P(B/IA_i))$   $P(B) = P(A_i) P(BVA_i) + P(A_i)P(BVA_i) + P(A_i)P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(A_i)P(BVA_i) + P(A_i)$   $P(B) = P(A_i) P(BVA_i) + P(A_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(A_i) P(A_i)$   $P(B) = P(A_i) P(BVA_i) + P(A_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(BVA_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(A_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(BVA_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(BVA_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(BVA_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(A_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(A_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) + P(A_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) P(BVA_i) P(BVA_i)$   $P(B) = P(A_i) P(BVA_i) P(BVA_i)$   $P(B) = P(BVA_i) P(BVA_i) P(BVA_i)$   $P(B) = P(BVA_i) P(BVA_i)$  P(B) =