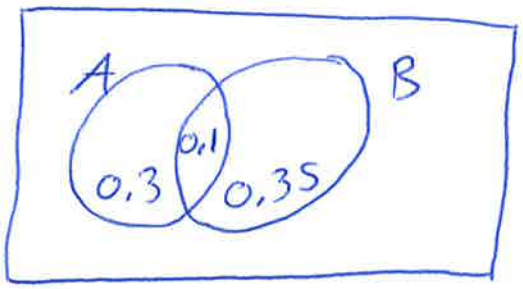
1. DRAWING A RANDOM CARD OUT OF A STANDARD DECK, WHAT IS THE PROBABILITY THAT IT'S A RED CARD BETWEEN 3 AND 10?

2. (a) DRAW THE VENN DIAGRAM FOR THIS TWO-WAY TABLE. (COMPLETE THE TABLE FIRST)

	B	$\bar{B}$	
A	0.2		
$\bar{A}$		0.1	0.4
		0.5	1

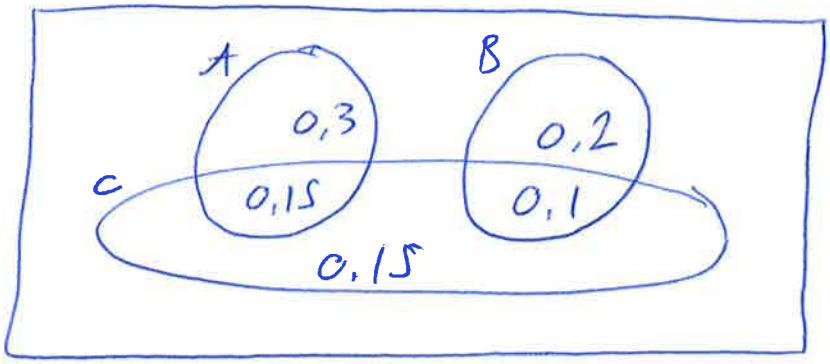
WHAT IS $P(A \cup B)$?

(b) DRAW THE TWO-WAY TABLE FOR THIS VENN DIAGRAM.



WHAT IS $P(A \cup B)$?

3.



(a) ARE A AND B DISJOINT? ARE THEY INDEPENDENT?

(b) CALCULATE $P(A|B)$, $P(B|C)$, $P(C|B)$.

(c) DRAW THE TREE DIAGRAM FOR A AND C, AND USE IT TO CALCULATE THE 4 INTERSECTION PROBABILITIES.

4. A DRUG TEST HAS 0.96 CHANCE OF POSITIVE RESULT IF THE DRUG IS PRESENT IN THE BODY AND 0.93 CHANCE OF NEGATIVE RESULT IF THE DRUG IS NOT PRESENT. THE PROBABILITY OF THE DRUG BEING PRESENT IN A RANDOM ATHLETE IS 0.007. GIVEN A POSITIVE TEST RESULT, WHAT IS THE PROBABILITY THAT THE DRUG IS PRESENT?