Foundations 12 – Probability Tables and Diagrams

Homework: Lesson #5 on Pg. 161: #1-11

Ex 1 The table below shows how students at Byng generally get to school.

	Bus, B	Car, C	Other, O	Total
Byng Arts A	250	100	75	
Regular R	400	275	100	
Total				

a) Complete the totals in the chart

b) How many students attend Lord Byng?

c) Use the numbers in the table to determine:

i. P(R) ii. $P(R \cap C)$ iii. $P(C|R)$ iv. $P(R|C)$

d) If a student is chosen at random, determine the probability that they are:

i. in Byng Arts ii. in Byng Arts and take the bus iii. in Byng Arts or take the bus

e) Are the events "the student is in Byng Arts" and "the student takes the bus" independent events? Explain

Ex 2 During a weekend in Vancouver, there is a 65% chance it will rain and 35% chance it will be dry on each day. If the weather on each day is independent:

a) Draw a tree diagram to show all possible outcomes for the weather during the weekend

b) Use the tree diagram to determine the probability that:

i. It rains both days ii. it rains one day iii. it rains at least 1 day

Ex 3 During a weekend in Vancouver, there is a 65% chance it will rain and 35% chance it will be dry on Saturday. If it rains on Saturday, the probability it rains on Sunday increases by 10%. If it is dry on Saturday, the probability it rains on Sunday is decreased by 15%.

a) Draw a tree diagram to show all possible outcomes for the weather during the weekend

b) Use the tree diagram to determine the probability that:

ii. It rains both days ii. it rains one day iii. it rains at least 1 day