

[www.mrc-papers.com](http://www.mrc-papers.com)



Mob: +974 55258711 / 55249797  
E-mail: rashed.saba@gmail.com

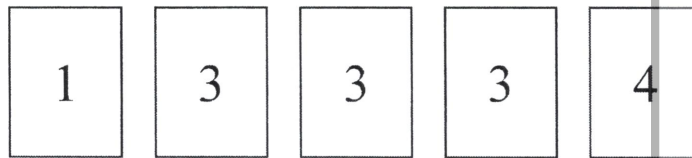
**CLASSIFIED**

International Examinations Papers

Mob: +974 55249797 / 55258711  
E-mail: rashed.saba@gmail.com

**MATHEMATIC A**  
**TOPIC- PROBABILITY**

- 16 Here are six cards.  
Each card has a number on it.



The cards are turned over to hide their numbers and are then mixed up. Malachi takes at random two of the cards and turns them over to show their numbers.

- (a) Calculate the probability that the number 4 is on both of the cards Malachi takes

Mob: +974 55258711 / 55249797  
E-mail: rashed.saba@gmail.com

(2)

- (b) Calculate the probability that the sum of the numbers on the two cards Malachi takes is an even number.

(3)

(Total for Question 16 is 5 marks)

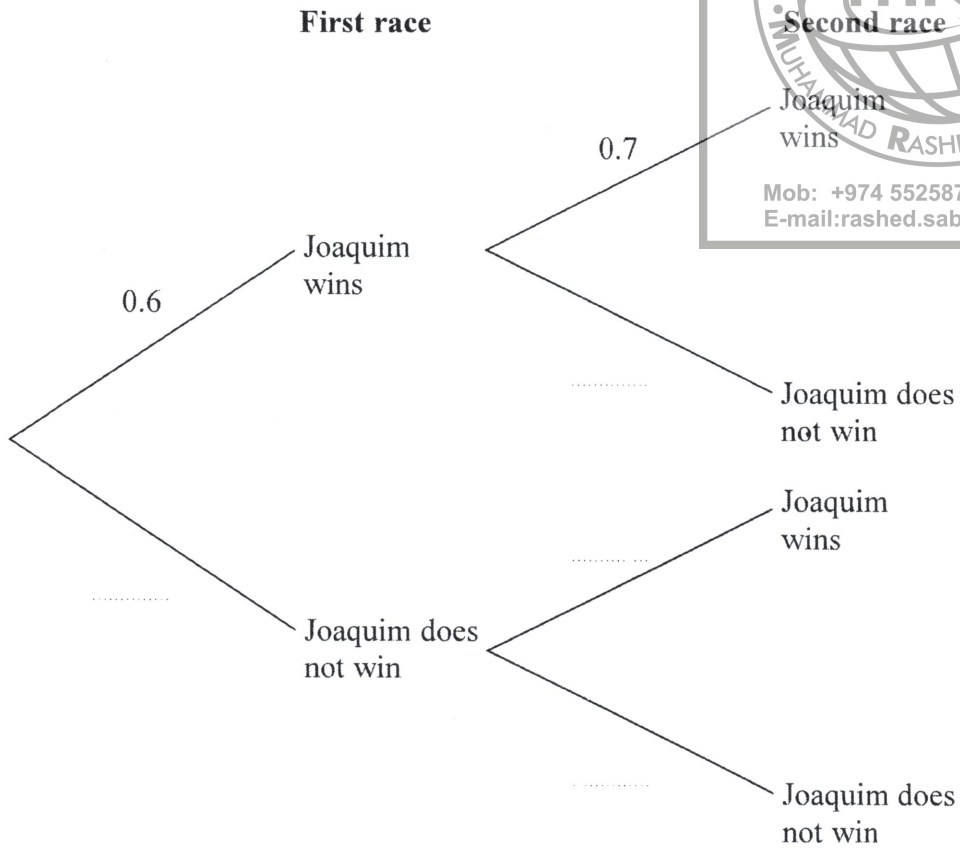


12 Joaquim takes part in two cycle races.

The probability that he wins the first race is 0.6

The probability that he wins the second race is 0.7

(a) Complete the probability tree diagram.



(b) Work out the probability that Joaquim wins both races.

(2)

(2)



Joaquim takes part in a third cycle race.  
The probability that Joaquim wins the third race is 0.2

(c) Work out the probability that he wins exactly one of the three races.



Mob: +974 55258711 / 55249797  
E-mail: rashed.saba@gmail.com

(3)

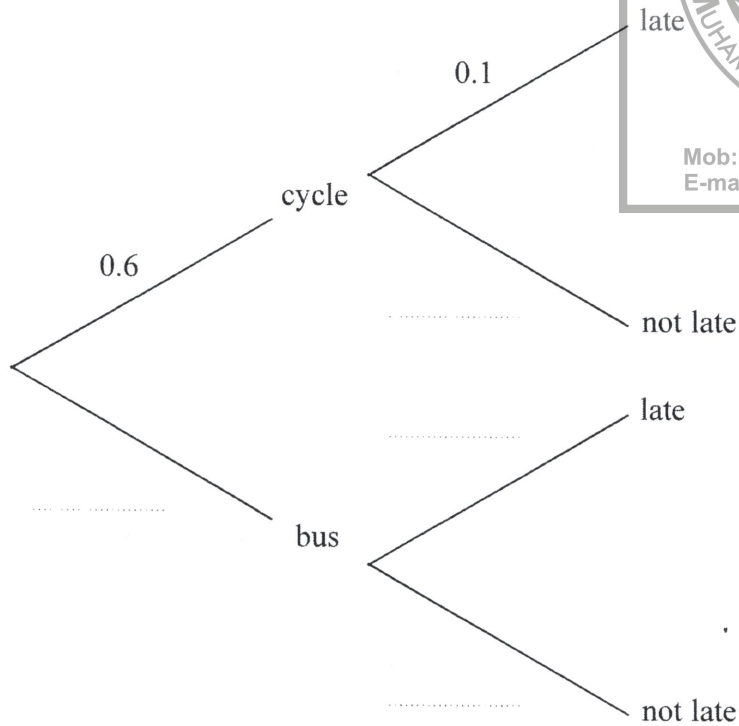
(Total for Question 12 is 7 marks)



17 Chaiwat either cycles to work or goes by bus.

On any day that he goes to work, the probability that he cycles is 0.6  
 When he cycles, the probability that he is late is 0.1  
 When he goes by bus, the probability that he is late is 0.3

(a) Complete the probability tree diagram.



(2)

(b) Calculate the probability that on a day Chaiwat goes to work, he cycles and is late for work.

(2)

(c) Calculate the probability that on a day Chaiwat goes to work, he is **not** late for work.

(3)

(Total for Question 17 is 7 marks)

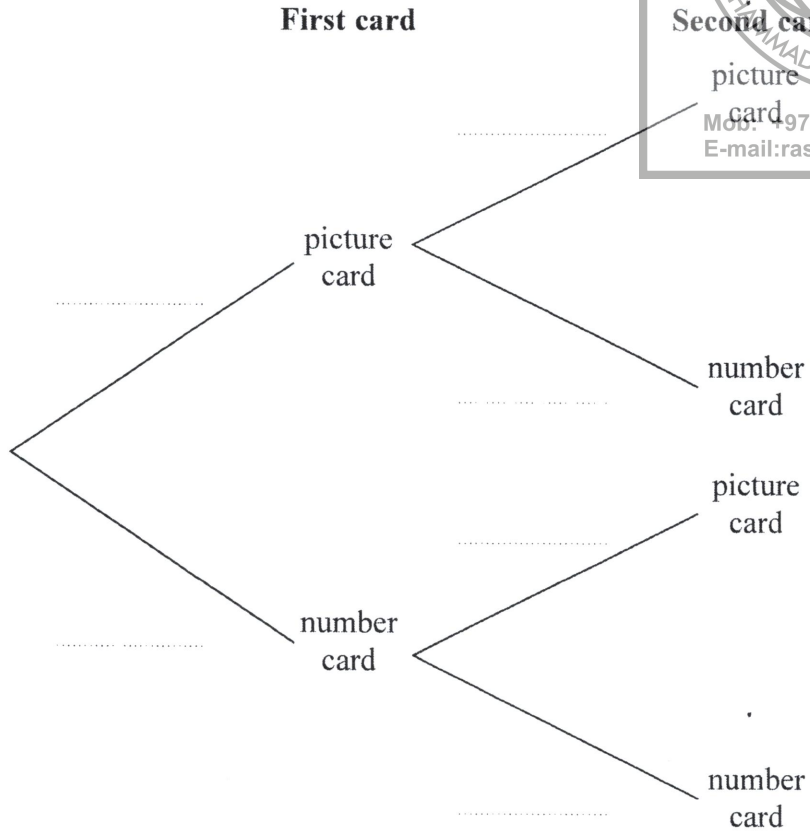




- 14 There are 52 cards in a pack.  
 12 cards are picture cards.  
 40 cards are number cards.

Melina takes at random a card from the pack.  
 She keeps the card and then takes at random a second card from the remainder of the pack.

(a) Complete the probability tree diagram.



(3)

(b) Work out the probability that the two cards Melina takes are both picture cards or both number cards.

(3)

(Total for Question 14 is 6 marks)

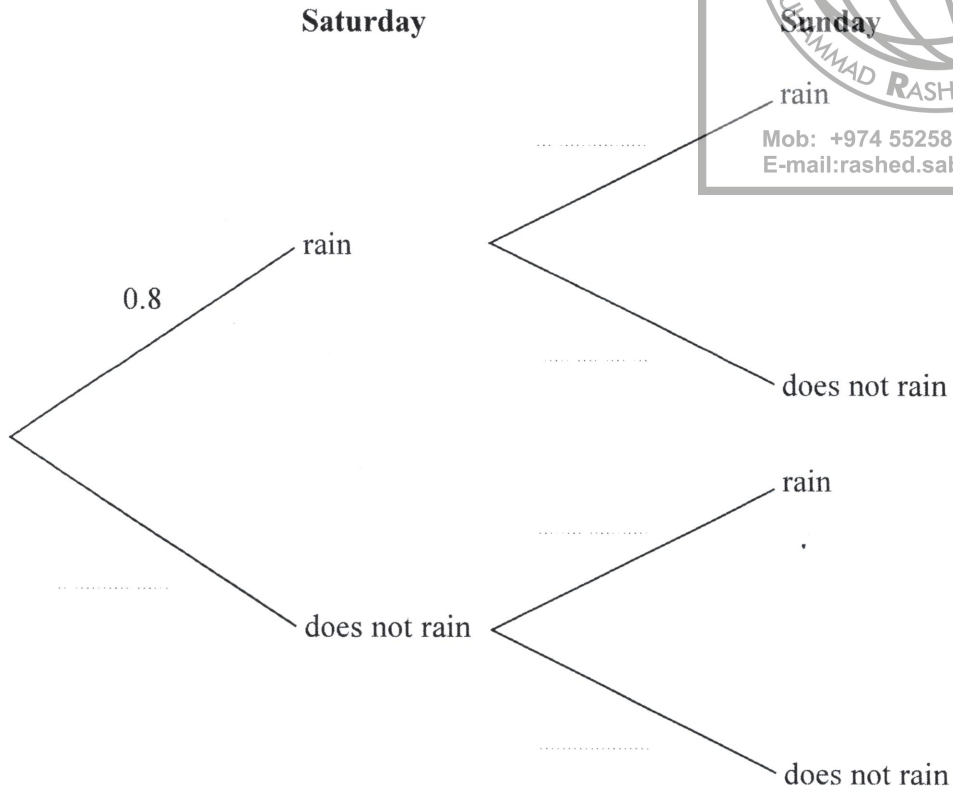


16 The probability that it will rain on Saturday is 0.8

If it rains on Saturday, the probability that it will rain on Sunday is 0.65

If it does not rain on Saturday, the probability that it will rain on Sunday is 0.4

(a) Use this information to complete the probability tree diagram.



(2)

(b) Work out the probability that it will rain on just one of these two days.

(3)

(Total for Question 16 is 5 marks)

