ST ANDREW'S JUNIOR COLLEGE

JC1 H1 MATHEMATICS (8865)

Term 3 Weekend Assignment 2

Topic: Probability

Name: _____ Marks:_____/**10**

C.G.: _____

1 JPJC Promo 8865/2021/Q5

(a) Events A and B are such that $\mathrm{P}(A) = 0.6$, $\mathrm{P}(B) = 0.4$ and $\mathrm{P}(B' \mid A) = 0.8$.

(i) Describe in words what is meant by $\mathrm{P}(B' \mid A)$. [1]

(ii) Find $\mathrm{P}(A \cap B')$. [1]

(iii) Find $\mathrm{P}(A \cap B)$. [1]

(iv) Find $\mathrm{P}(A \cup B')$. [2]

(b) A box contains 7 red balls and 3 green balls. Two balls are drawn, one after the other, without replacement.

(i) Draw a tree diagram to represent the possible outcomes. [2]

(ii) Find the probability that one red ball and one green ball are drawn. [2]

(iii) Find the probability that the first ball drawn is red given that one red ball and one green ball are drawn. [3]