Question 7 (5 marks)

For events A and B, from a sample space where A and B are both independent events, it is known that $8\Pr(A') + 3\Pr(B) = 8$ where A' represents the complement of A.

a. Show that $\Pr(A) = \frac{3}{8}\Pr(B)$. 1 mark

b. If $\Pr(A \cup B) = \frac{3}{4}$, find $\Pr(B)$. 3 marks

c. Calculate $\Pr(A' \cap B)$ where A' represents the complement of A. 1 mark