3. The probability distribution of the discrete random variable X is given by

x	2	3	4
$P(X = x)$	a	0.4	$0.6 - a$

where a is a constant.

(a) Find, in terms of a, $E(X)$

(2)

(b) Find the range of the possible values of $E(X)$

(3)

Given that $Var(X) = 0.56$

(c) find the possible values of a

(6)

DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA
DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

DO NOT WRITE IN THIS AREA

Question 3 continued

(Total for Question 3 is 11 marks)