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2. The discrete random variable X has the following probability distribution.

x	-2	-1	0	1	3
$P(X = x)$	0.15	a	b	a	0.4

(a) Find $E(X)$.

(2)

Given that $E(X^2) = 4.54$

(b) find the value of a and the value of b.

(5)

The random variable $Y = 3 - 2X$

(c) Find $\text{Var}(Y)$.

(3)

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Question 2 continued

Q2

(Total 10 marks)