

AQA – Exponential distributions – A2 Further Mathematics Statistics

1. [June/2021/Paper_7367/3S/No.7](#)

The random variable X has an exponential distribution with parameter λ

(a) Prove that $E(X) = \frac{1}{\lambda}$

[4 marks]

(b) Prove that $\text{Var}(X) = \frac{1}{\lambda^2}$

[7 marks]