

Classwork

A random variable X takes values between 4 and 6 with a probability density function

$$f(x) = \frac{1}{x \ln(1.5)}$$

for $4 \leq x \leq 6$

- (i) Check that the total area under the probability density function is equal to 1.
- (ii) What is $P(4.5 \leq X \leq 5.5)$?
- (ii) Calculate the cumulative distribution function.