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

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

for $4 \le x \le 6$

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