The probability density function of $X$ is

$$
f(x)=a e^{-a x}, \quad(x>0)
$$

Use this to prove that the corresponding cumulative distribution function (sometimes this is called just the distribution function) is

$$
F(x)=1-e^{-a x} .
$$

Hence find the probability that $X$ is greater than 5 if $a=0.5$.

