



**MathsNET**

A joined up approach to  
teaching and learning  
mathematics

# The Inhomogeneous Poisson Process

---

- Explain how the inhomogeneous Poisson process differs from the poisson process (the homogeneous one) that we introduced in previous videos.
- Give an expression for the probability  $P(N(t) = 0)$  if  $N(t)$  is given by an inhomogeneous Poisson process with rate function  $\lambda(t)$ .
- State the fundamental theorem of calculus.
- Give an expression for the probability  $P(N(t) = 1)$  if  $N(t)$  is given by an inhomogeneous Poisson process with rate function  $\lambda(t)$ .



**MathsNET**

A joined up approach to  
teaching and learning  
mathematics

# The Inhomogeneous Poisson Process

---

- Try to derive an expression for  $P(N(t) = 2)$  if  $N(t)$  is given by an inhomogeneous Poisson process with rate function  $\lambda(t)$ .