

6 The Poisson distribution — Part 1

— Answers

Answers

Work through these after trying the questions yourself.

6.1 The number of random events in a fixed interval (at a steady average rate).

6.2 λ (the same as the mean).

6.3 $P(X = 2) = e^{-3} \frac{3^2}{2!} = 0.0498 \times 4.5 = 0.224.$

6.4 $3(5) - 1 = 14.$

6.5 $3^2 \times 4 = 36.$

6.6 $P(X = 5) = e^{-4} \frac{4^5}{5!} = 0.0183 \times \frac{1024}{120} = 0.0183 \times 8.53 = 0.156 \text{ (3 s.f.)}.$