

Solutions

A computer help line receives on average 2 calls every 10 minutes

- ☒ The Poisson distribution is a suitable model
- ☐ The Poisson distribution is NOT a suitable model

On average a tool hire firm receives requests to hire out 2 floor sanders a day. The firm has 3 sanders and charges £40 per day.

- ☒ The Poisson distribution is a suitable model
- ☐ The Poisson distribution is NOT a suitable model

A customer services help line take calls 24 hours a day and customer have to wait between 1 and 10 minutes to speak to a representative depending on how busy the call centre is

- ☐ The Poisson distribution is a suitable model
- ☒ The Poisson distribution is NOT a suitable model

A car hire company hires between 3 and 20 cars per day depending on the time of the year (May-September is the busiest period)

- ☐ The Poisson distribution is a suitable model
- ☒ The Poisson distribution is NOT a suitable model

A bad stretch of road has, on average, 65 accidents per year.

- ☒ The Poisson distribution is a suitable model
- ☐ The Poisson distribution is NOT a suitable model

The M6 is known as the most deadly motorway in the UK. It is known to have an average of 160 fatal accidents per year. It is known that more accident occur in bad weather.

- ☐ The Poisson distribution is a suitable model
- ☒ The Poisson distribution is NOT a suitable model

Electric wire is produced in lengths of 300 metres. On average there is 1 defect in every 3000 metres of wire produced.

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- ☐ The Poisson distribution is NOT a suitable model

A van hire firm know from their records that the daily demand for vans is 8 per day.

- ☒ The Poisson distribution is a suitable model
- ☐ The Poisson distribution is NOT a suitable model

It is accepted that, on a production line for cereal, an average of 1 in every 1200 boxes are underfilled. When employee 3323 is on shift, they are known to be a little lazy and this average creeps up to 4 in 1200.

- ☐ The Poisson distribution is a suitable model
- ☒ The Poisson distribution is NOT a suitable model

In a 24 hour period, Jayce uses the computer for an average of 12 minutes per hour. Jayce only uses the computer from 8am - 4pm

- ☐ The Poisson distribution is a suitable model
- ☒ The Poisson distribution is NOT a suitable model

Across a year (365 days), the zoo records an average of 1300 visitors per day. It is known that the zoo is closed from December 25th - February 14th

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- ☒ The Poisson distribution is NOT a suitable model

A bus company's records show that on average 4 buses a week break down.

- ☒ The Poisson distribution is a suitable model
- ☐ The Poisson distribution is NOT a suitable model