

quiz2-5

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a

The number of stops, X should follow the poisson distribution with $\lambda_4 = 4(3) = 12$.

$$P(X \geq 7) = 1 - \sum_{i=0}^6 P(X = i) = 1 - \sum_{i=0}^6 \frac{e^{-12} 12^i}{i!} = 0.9542.$$

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1-sum(dpois(0:6,12))
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## [1] 0.9541777
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b.

The weight of a slice of pizza, W , follows the uniform distribution $U(100, 130)$.

$$P(W > 120) = \frac{130-120}{130-100} = \frac{1}{3}.$$