Sri Lanka Institute of Information

Technology



Lab Submission

Lab sheet No 07

**IT24101829**

**Ranasinghe R.P.V.K.**

**IT2120 - Probability and Statistics**

B.Sc. (Hons) in Information Technology

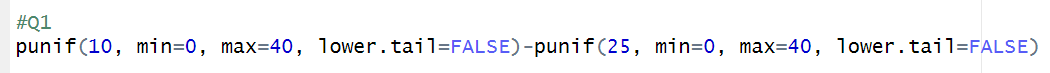
**Exercise**

1. A train arrives at a station uniformly between 8:00 a.m. and 8:40 a.m. Let the

random variable X represent the number of minutes the train arrives after 8:00

a.m. What is the probability that the train arrives between 8:10 a.m. and 8:25

a.m.?



Answer: -

A close-up of a computer code

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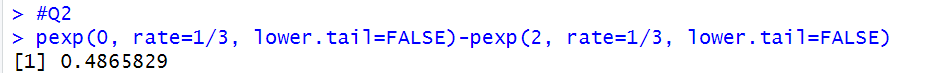
2. The time (in hours) to complete a software update is exponentially distributed

with rate λ = 1/3. Find the probability that an update will take at most 2 hours.

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Description automatically generated

Answer: -



3. Suppose IQ scores are normally distributed with a mean of 100 and a

standard deviation of 15.

i. What is the probability that a randomly selected person has an IQ

above 130?

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Description automatically generated

Answer: -

A black and blue text

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ii. What IQ score represents the 95th percentile?

A number and a number

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Answer: -

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