

Part 1

0 points possible (ungraded)

Food Chemicals Inc. (FCI) produces industrial chemicals used in many food products. Some of their products are also sold to fuel companies to prevent oxidation in fuel. One of their primary products is Butylated hydroxytoluene, simply known as BHT. BHT is produced through the reaction of p-cresol and isobutylene when catalyzed by sulfuric acid.

Every shipment of p-cresol that arrives gets tested and receives a specialized rating from FCI. Due to some of FCI's specialized products, they had to create this rating system themselves.

Shipments of p-cresol from CHEMI-Cal, one of FCI's larger suppliers, receive ratings that fall in a continuous uniform distribution ranging from 7 to 15. Given this distribution, what is the probability that a delivery from CHEMI-Cal receives:

A rating of above 12.7?

Write your answer as a fraction, or as a number with at least three decimals.

A rating between 8.2 and 9.5?

Write your answer as a fraction, or as a number with at least three decimals.

You have used 2 of 3 attempts

Correct

Part 2

0 points possible (ungraded)

Martinez Chemicals in Mexico also supplies FCI with p-cresol. Shipments from Martinez Chemicals always receive ratings above 6 and below 15. Most of the time, Martinez Chemicals shipments of p-cresol receive a rating of 11. Using the triangle distribution, what is the probability that a shipment from Martinez Chemicals:

receives a rating above 9?

Write your answer as a fraction, or as a number with at least three decimals.

receives a rating of above 8 and below 14?

Write your answer as a fraction, or as a number with at least three decimals.

You have used 1 of 3 attempts

Correct**Part 3 A**

0 points possible (ungraded)

Gaisburg International in Germany is another supplier of p-cresol to FCI. Shipments of p-cresol from Gaisburg international receive an average rating of 13 with a standard deviation of 2.3. Using the normal distribution, what is the probability that a shipment from Gaisburg Chemicals:

has a rating of 12 or higher?

Round to three decimal places.

Has a rating under 15 but above 9.8?

Round to three decimal places.

You have used 1 of 3 attempts

Correct**Part 3 B**

0 points possible (ungraded)

Create a 95% prediction interval for p-cresol ratings from Gaisburg International centered on the mean.

What is the upper bound of this interval?

Round to two decimal places.

What is the lower bound of this interval?

Round to two decimal places.

8.49

Submit

You have used 3 of 3 attempts

Correct