

Examrace

Statistics MCQs – Continuous Distributions Part 8

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141. In a large statistics class the heights of the students are normally distributed with a mean of 172cm and a variance of 25cm^2 . What proportion of students are between 175cm and 185cm in height?

- a. 0.954
- b. 0.601
- c. 0.718
- d. 0.883
- e. 0.270

Answer: E

142. A statistical analysis of long-distance telephone calls indicates that the length of these calls is normally distributed with a mean of 240 seconds and a standard deviation of 40 seconds. What proportion of calls last less than 180 seconds or more than 300 seconds?

- a. 0.911
- b. 0.034
- c. 0.134
- d. 0.067
- e. 0.548

Answer: C

143. A bakery finds that the average weight of its most popular package of cookies is 32.06g with a standard deviation of 0.10g. Assuming that the weight of the package of cookies follows a normal distribution, what portion of cookie packages will weigh less than 31.90 g or more than 32.30 g?

- a. 0.06
- b. 0.24
- c. 0.78

d. 0.01

e. 0.00

Answer: A

144. A statistical analysis of long-distance telephone calls indicates that the length of these calls is normally distributed with a mean of 240 seconds and a standard deviation of 40 seconds. What proportion of calls lasts less than 180 seconds?

a. 0.214

b. 0.094

c. 0.933

d. 0.466

e. 0.067

Answer: E

145. In a large statistics class the heights of the students are normally distributed with a mean of 172cm and a variance of 25cm^2 . What is the probability that a randomly selected student from this class will be taller than 180cm?

a. 0.055

b. 0.655

c. 0.274

d. 0.919

e. 0.992

Answer: A

146. In a large statistics class the heights of the students are normally distributed with a mean of 172cm and a variance of 25cm^2 . What is the probability that a randomly selected student from this class will be taller than 170cm?

a. 0.055

b. 0.655

c. 0.274

d. 0.919

e. 0.992

Answer: B

147. In a large statistics class the heights of the students are normally distributed with a mean of 172cm and a variance of 25cm^2 . What is the probability that a randomly selected student from this class will be taller than 175cm?

- a. 0.055
- b. 0.655
- c. 0.274
- d. 0.919
- e. 0.992

Answer: C

148. In a large statistics class the heights of the students are normally distributed with a mean of 172cm and a variance of 25cm^2 . What is the probability that a randomly selected student from this class will be taller than 165cm?

- a. 0.055
- b. 0.655
- c. 0.274
- d. 0.919
- e. 0.992

Answer: D

149. In a large statistics class the heights of the students are normally distributed with a mean of 172cm and a variance of 25cm^2 . What is the probability that a randomly selected student from this class will be taller than 160cm?

- a. 0.055
- b. 0.655
- c. 0.274
- d. 0.919
- e. 0.992

Answer: E

150. Using the standard normal table, the sum of the probabilities to the right of $z = 2.18$ and to the left of $z = -1.75$ is:

- a. 0.4854
- b. 0.4599

- c. 0.0146
- d. 0.0401
- e. 0.0547

Answer: E

151. The time until first failure of a brand of inkjet printers is normally distributed with a mean of 1500 hours and a standard deviation of 200 hours. What proportion of printers fails before 1000 hours?

- a. 0.0062
- b. 0.0668
- c. 0.8413
- d. 0.0228
- e. 0.6915

Answer: A

152. The time until first failure of a brand of inkjet printers is normally distributed with a mean of 1500 hours and a standard deviation of 200 hours. What proportion of printers fails before 1200 hours?

- a. 0.0062
- b. 0.0668
- c. 0.8413
- d. 0.0228
- e. 0.6915

Answer: B

153. The time until first failure of a brand of inkjet printers is normally distributed with a mean of 1500 hours and a standard deviation of 200 hours. What proportion of printers fails before 1700 hours?

- a. 0.0062
- b. 0.0668
- c. 0.8413
- d. 0.0228
- e. 0.6915

Answer: C

154. The time until first failure of a brand of inkjet printers is normally distributed with a mean of 1500 hours and a standard deviation of 200 hours. What proportion of printers fails before 1100 hours?

- a. 0.0062
- b. 0.0668
- c. 0.8413
- d. 0.0228
- e. 0.6915

Answer: D

155. The time until first failure of a brand of inkjet printers is normally distributed with a mean of 1500 hours and a standard deviation of 200 hours. What proportion of printers fails before 1600 hours?

- a. 0.0062
- b. 0.0668
- c. 0.8413
- d. 0.0228
- e. 0.6915

Answer: E

156. Student marks for a first-year Statistics class test follow a normal distribution with a mean of 63 % and a standard deviation of 7 % . What is the probability that a randomly selected student who wrote the test got more than 75 % ?

- a. 0.043
- b. 0.388
- c. 0.159
- d. 0.666
- e. 0.968

Answer: A

157. Student marks for a first-year Statistics class test follow a normal distribution with a mean of 63 % and a standard deviation of 7 % . What is the probability that a randomly selected student who wrote the test got more than 65 % ?

- a. 0.043

- b. 0.388
- c. 0.159
- d. 0.666
- e. 0.968

Answer: B

158. Student marks for a first-year Statistics class test follow a normal distribution with a mean of 63 % and a standard deviation of 7 % . What is the probability that a randomly selected student who wrote the test got more than 70 % ?

- a. 0.043
- b. 0.388
- c. 0.159
- d. 0.666
- e. 0.968

Answer: C

159. Student marks for a first-year Statistics class test follow a normal distribution with a mean of 63 % and a standard deviation of 7 % . What is the probability that a randomly selected student who wrote the test got more than 60 % ?

- a. 0.043
- b. 0.388
- c. 0.159
- d. 0.666
- e. 0.968

Answer: D

160. Student marks for a first-year Statistics class test follow a normal distribution with a mean of 63 % and a standard deviation of 7 % . What is the probability that a randomly selected student who wrote the test got more than 50 % ?

- a. 0.043
- b. 0.388
- c. 0.159
- d. 0.666
- e. 0.968

Answer: E

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