

Department of Statistics and Operations Research
College of Science
King Saud University

STAT 145

H. W. 5

Dr. M. Kayid

Student Name	
Student Number	
Section	
Attendance_Number	

1	2	3	4	5	6	7	8	9	10

11	12	13	14	15	16	17	18	19	20

Question No. 1

For a population of patients, 40% of them are liver C virus patients. If we randomly choose 7 patients. Let X = the number in the 7 chosen who are liver C virus patients, then

- 1- The probability that exactly two patients have liver C virus is
(a) 0.0774 (b) 0.2613 (c) 0.0223 (d) 0.5673 (e) none of these
 - 2- The probability that at least three patients have liver C virus is
(a) 0.4199 (b) 0.5801 (c) 0.2898 (d) 0.7102 (e) none of these
 - 3- The probability that all of the patients have liver C virus is
(a) 0.02799 (b) 0.1306 (c) 0.00164 (d) 0.412 (e) none of these
 - 4- The mean of X is
(a) 4.2 (b) 2.8 (c) 7.01 (d) 2.4 (e) none of these
 - 5- The variance of X is
(a) 1.68 (b) 2.8 (c) 1.296 (d) 8.4 (e) none of these
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Question No. 2

Suppose that the number of visits of families to a public park in a month has a Poisson (4) distribution. Then

- 6- The probability that two families visits to a public park in a month is
(a) 0.547 (b) 0.647 (c) 0.147 (d) 0.747 (e) none of these
 - 7- The probability that at most 3 families visits to a public park in a month is
(a) 0.0144 (b) 0.4335 (c) 0.9982 (d) 0.0126 (e) none of these
 - 8- The mean of X is
(a) 4 (b) 2 (c) 1.6 (d) 2.3664 (e) none of these
 - 9- The standard deviation of X is
(a) 4 (b) 2 (c) 1.6 (d) 2.3664 (e) none of these
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Question NO. 3:

The cholesterol level for Saudi girls is distributed normally with mean 4.4 and standard deviation 0.6 . If we choose a Saudi girl at random, then

- 10- The probability that her cholesterol level is less than 4.4
(a) 0.9332 (b) 0 (c) 0.0668 (d) 0.50 (e) none of these
- 11- The probability that her cholesterol level is more than 5.3
(a) 0.9332 (b) 0 (c) 0.0668 (d) 0.50 (e) none of these

12- The probability that her cholesterol level is 3.88
(a) 0.9332 (b) 0 (c) 0.0668 (d) 0.50 (e) none of these

13- The probability that her cholesterol level is between 4.7 and 5.6
(a) 0.0668 (b) 0.9772 (c) 0.2857 (d) 0.6915 (e) none of these

14- The variance for cholesterol level for Saudi girls is
(a) 4.4 (b) 0.36 (c) 1 (d) 0.6 (e) none of these

Question NO. 4:

15- The area to the left of $Z = 1.35$ is
(a) 0.0968 (b) 0.0885 (c) 0.9032 (d) 0.9115 (e) none of these

16- The area between $Z = -2.16$ and $Z = -0.65$ is
(a) 0.2578 (b) 0.0154 (c) 0.2424 (d) 0.7422 (e) none of these

17- The area at $Z = -2$ is
(a) 0.0882 (b) 0.9772 (c) 1 (d) 0 (e) none of these

If Z has standard normal distribution, then:

18- $P(Z < -0.57) =$
(a) 0.2843 (b) 0.2514 (c) 0.7157 (d) 0.7123 (e) none of these

19- $P(Z > 1.43) =$
(a) 0.9962 (b) 0.9236 (c) 0.0764 (d) 0.9222 (e) none of these

20- $P(z < Z < 1.01) = 0.3876$, then $z =$
(a) 0.8438 (b) -0.11 (c) 1.23 (d) 0.11 (e) none of these