Assignment 1

Due on: 2020-02-12, 23:59 IST

The problem of a function of a group of 1000 persons. The mean age is 30 years and the standard deviation is 10 years.

1. The function of a group of 500 persons is to be studied. The mean age is 30 years and the standard deviation is 10 years. Assuming the age distribution to be normal, find the probability that the age of a randomly selected person is less than 20 years.

2. A group of 1000 students is to be tested on their knowledge of mathematics. The mean score is 75 and the standard deviation is 10. Assuming the score distribution to be normal, find the probability that a randomly selected student's score is more than 90.

3. A survey of 500 households in a city found that the average income is $50,000 with a standard deviation of $10,000. Assuming that the income distribution is normal, find the probability that a randomly selected household's income is less than $40,000.

4. The heights of a group of 1000 students are normally distributed with a mean of 170 cm and a standard deviation of 10 cm. Find the probability that a randomly selected student's height is between 160 cm and 180 cm.

5. A set of 1000 test scores for a mathematics exam is normally distributed with a mean of 75 and a standard deviation of 10. Find the probability that a randomly selected score is between 65 and 85.

6. The weights of 1000 apples are normally distributed with a mean of 150 grams and a standard deviation of 20 grams. Find the probability that a randomly selected apple weighs between 130 grams and 170 grams.

7. A set of 1000 test scores for a statistics exam is normally distributed with a mean of 70 and a standard deviation of 15. Find the probability that a randomly selected score is between 55 and 85.

8. The IQ scores of 1000 students are normally distributed with a mean of 100 and a standard deviation of 15. Find the probability that a randomly selected student's IQ score is between 85 and 115.

9. A set of 1000 test scores for a physics exam is normally distributed with a mean of 75 and a standard deviation of 10. Find the probability that a randomly selected score is less than 60.

10. The weights of 1000 oranges are normally distributed with a mean of 100 grams and a standard deviation of 10 grams. Find the probability that a randomly selected orange weighs less than 90 grams.

11. A set of 1000 test scores for a biology exam is normally distributed with a mean of 70 and a standard deviation of 10. Find the probability that a randomly selected score is more than 80.

12. The heights of 1000 students are normally distributed with a mean of 160 cm and a standard deviation of 10 cm. Find the probability that a randomly selected student's height is more than 170 cm.

13. The weights of 1000 apples are normally distributed with a mean of 150 grams and a standard deviation of 20 grams. Find the probability that a randomly selected apple weighs more than 180 grams.

14. The IQ scores of 1000 students are normally distributed with a mean of 100 and a standard deviation of 15. Find the probability that a randomly selected student's IQ score is more than 115.

15. A set of 1000 test scores for a chemistry exam is normally distributed with a mean of 75 and a standard deviation of 10. Find the probability that a randomly selected score is less than 65.

16. The weights of 1000 oranges are normally distributed with a mean of 100 grams and a standard deviation of 10 grams. Find the probability that a randomly selected orange weighs less than 95 grams.

17. A set of 1000 test scores for a history exam is normally distributed with a mean of 70 and a standard deviation of 10. Find the probability that a randomly selected score is more than 85.

18. The heights of 1000 students are normally distributed with a mean of 160 cm and a standard deviation of 10 cm. Find the probability that a randomly selected student's height is less than 155 cm.

19. The weights of 1000 apples are normally distributed with a mean of 150 grams and a standard deviation of 20 grams. Find the probability that a randomly selected apple weighs less than 140 grams.

20. A set of 1000 test scores for a math exam is normally distributed with a mean of 75 and a standard deviation of 10. Find the probability that a randomly selected score is more than 80.