

Suzhou Temperature Variation Problem

Suzhou, a city in Jiangsu, China, is known for its temperate climate. The average temperature in Suzhou is 20°C . However, like all cities, the daily temperature in Suzhou varies. Let's assume that the daily temperature in Suzhou follows a normal distribution with a mean of 20°C and a standard deviation of 3°C



- What is the probability that on a randomly chosen day, the temperature in Suzhou is between 17°C and 23°C ?
- What is the probability that the temperature exceeds 24°C on a randomly chosen day?
- If the coldest 5% of days are considered "unusually cold," what is the temperature below which a day is considered unusually cold?
- If the hottest 10% of days are considered "heatwaves," what is the temperature above which a day is considered a heatwave?

Use the properties of the normal distribution to solve the problem.

Suzhou Industrial Park (SIP) Annual Income Problem

The Suzhou Industrial Park (SIP) is a major economic hub in Suzhou, China, attracting thousands of professionals from various industries around the world. Let's assume that the annual incomes of attracted talent in the SIP follow a normal distribution. The average annual income is ¥300,000, with a standard deviation of ¥50,000.



- What is the probability that a randomly chosen employee earns between ¥250,000 and ¥350,000 annually?
- What percentage of employees earn more than ¥400,000 annually?
- If the top 5% of earners are considered "high earners," what is the minimum income an employee must earn to be classified as a high earner?
- If the bottom 10% of earners are considered "low earners," what is the maximum income an employee can earn and still be classified as a low earner?

Use the properties of the normal distribution to solve the problem.