

- 1) A factory produces light bulbs, and each bulb has a 5% chance of being defective. A quality control inspector selects **20 bulbs at random** from the production line.

Let X be the number of defective bulbs in the sample.

Question:

What is the probability that exactly **2** of the selected bulbs are defective?

- 2) A call center receives an average of **6 calls per hour**.

Let X be the number of calls received in a randomly chosen hour.

Questions:

1. What is the probability that the call center receives **exactly 4 calls** in one hour?
2. What is the probability that the call center receives **at most 5 calls** in one hour?
3. What is the probability that the call center receives **at least 3 calls** in one hour?