

## Statistics MCQs –Continuous Distributions Part 2

21. In a popular shopping centre, the waiting time for an ABSA ATM machine is found to be uniformly distributed between 1 and 5 minutes. What is the probability of waiting between 2 and 5 minutes to use the ATM?

- a. 0.25
- b. 0.50
- c. 0.75
- d. 0.20
- e. 0.40

Answer: C

22. In a popular shopping centre, the waiting time for an ABSA ATM machine is found to be uniformly distributed between 1 and 6 minutes. What is the probability of waiting between 2 and 3 minutes to use the ATM?

- a. 0.25
- b. 0.50
- c. 0.75
- d. 0.20
- e. 0.40

Answer: D

23. In a popular shopping centre, the waiting time for an ABSA ATM machine is found to be uniformly distributed between 1 and 6 minutes. What is the probability of waiting between 2 and 4 minutes to use the ATM?

- a. 0.25
- b. 0.50
- c. 0.75
- d. 0.20
- e. 0.40

Answer: E

24. In a popular shopping centre, the waiting time for an ABSA ATM machine is found to be uniformly distributed between 1 and 5 minutes. What is the probability of being able to use the ATM in the first 30 seconds of waiting?

- a. 0.25
- b. 0.50
- c. 0.75
- d. 0.20
- e. 0.125

Answer: E

25. The length of time patients must wait to see a doctor at an emergency room of a large hospital is uniformly distributed between 40 minutes and 3 hours. What is the probability that a patient will have to wait between 50 minutes and 2 hours to see a doctor?

- a. 0.500
- b. 0.286
- c. 0.643
- d. 0.786
- e. 0.714

Answer: A

26. The length of time patients must wait to see a doctor at an emergency room of a large hospital is uniformly distributed between 40 minutes and 3 hours. What is the probability that a patient will have to wait between 50 minutes and 1.5 hours to see a doctor?

- a. 0.500
- b. 0.286
- c. 0.643
- d. 0.786
- e. 0.714

Answer: B

27. The length of time patients must wait to see a doctor at an emergency room of a large hospital is uniformly distributed between 40 minutes and 3 hours. What is the probability that a patient will have to wait between 30 minutes and 2 hours to see a doctor?

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- a. 0.500
- b. 0.286
- c. 0.643
- d. 0.786
- e. 0.714

Answer: C

28. The length of time patients must wait to see a doctor at an emergency room of a large hospital is uniformly distributed between 40 minutes and 3 hours. What is the probability that a patient will have to wait between 40 minutes and 2.5 hours to see a doctor?

- a. 0.500
- b. 0.286
- c. 0.643
- d. 0.786
- e. 0.714

Answer: D

29. The length of time patients must wait to see a doctor at an emergency room of a large hospital is uniformly distributed between 40 minutes and 3 hours. What is the probability that a patient will have to wait between 50 minutes and 2.5 hours to see a doctor?

- a. 0.500
- b. 0.286
- c. 0.643
- d. 0.786
- e. 0.714

Answer: E

30. A train arrives at a station every 20 minutes. What is the probability that a person arriving at the station will have to wait less than half an hour for the next train?

- a. 0.524
- b. 0.237
- c. 0.500
- d. 1.000

e. 0.872

Answer: D

31. In a small town the town hall clock strikes every half an hour. If you wake up at random during the middle of the night, what is the probability that you will have to wait less than 5 minutes before hearing the clock strike again?

a. 0.500

b. 0.167

c. 0.833

d. 0.457

e. 0.138

Answer: B

32. It is known that the amount of apple juice found in 500ml bottle is uniformly distributed between 495ml and 510ml. What is the probability that a randomly selected bottle of apple juice contains less than 500ml of juice?

a. 0.333

b. 0.667

c. 0.500

d. 0.000

e. 1.000

Answer: A

33. It is known that the amount of apple juice found in 500ml bottle is uniformly distributed between 495ml and 510ml. What is the probability that a randomly selected bottle of apple juice contains more than 500ml of juice?

a. 0.333

b. 0.667

c. 0.500

d. 0.000

e. 1.000

Answer: B

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34. The mass of a 1000g container of yoghurt is equally likely to take on any value in the interval (995g,1010g). The container will not contain less than 995g or more than 1010g of yoghurt. What is the probability that a randomly chosen container of yoghurt has a mass of less than 1000g?

a. 0.333

b. 0.667

c. 0.500

d. 0.000

e. 1.000

Answer: A

35. An investor knows that his portfolio is equally likely to yield an annual return anywhere in the interval [5%, 35%]. What is the probability that he will earn more than 13.5% in the forthcoming year?

a. 0.72

b. 0.50

c. 0.42

d. 0.17

e. 0.83

Answer: A

36. An investor knows that his portfolio is equally likely to yield an annual return anywhere in the interval [5%, 35%]. What is the probability that he will earn more than 20% in the forthcoming year?

a. 0.72

b. 0.50

c. 0.42

d. 0.17

e. 0.83

Answer: B

37. An investor knows that his portfolio is equally likely to yield an annual return anywhere in the interval [5%, 35%]. What is the probability that he will earn more than 22.5% in the forthcoming year?

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- a. 0.72
- b. 0.50
- c. 0.42
- d. 0.17
- e. 0.83

Answer: C

38. An investor knows that his portfolio is equally likely to yield an annual return anywhere in the interval [5%, 35%]. What is the probability that he will earn more than 30% in the forthcoming year?

- a. 0.72
- b. 0.50
- c. 0.42
- d. 0.17
- e. 0.83

Answer: D

39. An investor knows that his portfolio is equally likely to yield an annual return anywhere in the interval [5%, 35%]. What is the probability that he will earn more than 10% in the forthcoming year?

- a. 0.72
- b. 0.50
- c. 0.42
- d. 0.17
- e. 0.83

Answer: E

40. The distance between Cape Town and Hermanus is 120km. You are travelling towards Hermanus (from Cape Town) and you have been dropped off at some point along the highway between Cape Town and Hermanus. The only information known to you is that you have passed the half-way mark to Hermanus. What is the probability that you still have more than 30km to travel?

- a. 0.625
- b. 0.375

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c. 0.750

d. 0.666

e. 0.500

**Answer: E**