

Sheet – 06: Probability – Basic Ideas

- 1) What is an experiment in the context of probability?
 - (a) A scientific test
 - (b) A process that results in one of several possible outcomes
 - (c) A mathematical calculation
 - (d) A statistical graph
- 2) What is a trial in probability?
 - (a) A legal proceeding
 - (b) A single performance of an experiment
 - (c) A type of error
 - (d) A type of statistical graph
- 3) What is an outcome in probability?
 - (a) The result of a trial
 - (b) The process of performing an experiment
 - (c) The total number of possible results
 - (d) The likelihood of an event occurring
- 4) What is an observation in probability?
 - (a) The act of watching an experiment
 - (b) The result of a single trial of an experiment
 - (c) The total number of possible outcomes
 - (d) The likelihood of an event occurring
- 5) What is a sample space in probability?
 - (a) The physical location where an experiment is conducted
 - (b) The set of all possible outcomes of an experiment
 - (c) The likelihood of an event occurring
 - (d) The number of trials conducted in an experiment
- 6) What is a finite sample space?
 - (a) A sample space with a countable number of outcomes
 - (b) A sample space with an uncountable number of outcomes
 - (c) A sample space with no outcomes
 - (d) A sample space with negative outcomes
- 7) What is an infinite sample space?
 - (a) A sample space with a countable number of outcomes
 - (b) A sample space with an uncountable number of outcomes
 - (c) A sample space with no outcomes
 - (d) A sample space with negative outcomes
- 8) What is an event in probability?
 - (a) A social gathering
 - (b) A single outcome of an experiment
 - (c) A subset of the sample space
 - (d) The total number of possible outcomes
- 9) What is the probability of an impossible event?
 - (a) 0
 - (b) 1
 - (c) 0.5
 - (d) Undefined
- 10) What is the probability of a certain event?
 - (a) 0
 - (b) 1
 - (c) 0.5
 - (d) Undefined
- 11) What is the sum of the probabilities of all outcomes in a sample space?
 - (a) 0
 - (b) 1
 - (c) The number of outcomes in the sample space
 - (d) Undefined
- 12) If an event includes all outcomes in the sample space, what is its probability?
 - (a) 0
 - (b) 1
 - (c) 0.5
 - (d) Undefined
- 13) What is the probability of the complement of an event?
 - (a) 0
 - (b) 1 minus the probability of the event
 - (c) The probability of the event
 - (d) Undefined
- 14) If two events are mutually exclusive, what is the probability of their intersection?
 - (a) 0
 - (b) 1
 - (c) 0.5
 - (d) Undefined
- 15) If two events are independent, what is the probability of their intersection?
 - (a) 0
 - (b) The product of their probabilities
 - (c) The sum of their probabilities
 - (d) Undefined
- 16) What is the probability of the union of two mutually exclusive events?
 - (a) 0
 - (b) The product of their probabilities
 - (c) The sum of their probabilities
 - (d) Undefined
- 17) What is the probability of the union of two independent events?
 - (a) 0
 - (b) The product of their probabilities

- (c) The sum of their probabilities minus the probability of their intersection
 - (d) Undefined
- 18) What is the maximum value a probability can take?
- (a) 0
 - (b) 1
 - (c) The number of outcomes in the sample space
 - (d) Infinity
- 19) What is the minimum value a probability can take?
- (a) 0
 - (b) 1
 - (c) -1
 - (d) Undefined
- 20) If an event has a probability of 0, does it mean it is impossible?
- (a) Yes
 - (b) No
 - (c) It depends on the sample space
 - (d) It depends on the number of trials
- 21) If an event has a probability of 1, does it mean it is certain to occur?
- (a) Yes
 - (b) No
 - (c) It depends on the sample space
 - (d) It depends on the number of trials
- 22) What is the probability of an event that is not in the sample space?
- (a) 0
 - (b) 1
 - (c) Undefined
 - (d) It depends on the event
- 23) What is the probability of the empty set?
- (a) 0
 - (b) 1
 - (c) Undefined
 - (d) It depends on the sample space
- 24) What is the probability of the sample space?
- (a) 0
 - (b) 1
 - (c) Undefined
 - (d) It depends on the sample space
- 25) What is the probability of the union of an event and its complement?
- (a) 0
 - (b) 1
 - (c) The probability of the event
 - (d) Undefined
- 26) What is the probability of the intersection of an event and its complement?
- (a) 0

- (b) 1
 - (c) The probability of the event
 - (d) Undefined
- 27) If an event has a probability of 0.5, does it mean it is equally likely to occur or not occur?
- (a) Yes
 - (b) No
 - (c) It depends on the sample space
 - (d) It depends on the number of trials
- 28) John tosses a fair coin. What is this action called in probability terminology?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) A sample space
- 29) Sarah rolls a six-sided die. The die landing on a 4 is an example of what in probability?
- (a) An experiment
 - (b) An outcome
 - (c) A trial
 - (d) A sample space
- 30) In a game of cards, drawing a card from a standard deck is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 31) The set of all possible outcomes when rolling a six-sided die is called what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) A sample space
- 32) In a game of cards, drawing a heart is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 33) When flipping a coin twice, the set of all possible outcomes (HH, HT, TH, TT) is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) A sample space
- 34) In a game of cards, drawing a card from a standard deck multiple times is an example of what?
- (a) An event
 - (b) An outcome

- (c) A trial
 - (d) An experiment
- 35) When flipping a coin, the coin landing on heads is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 36) The set of all possible outcomes when flipping a coin (heads, tails) is an example of what type of sample space?
- (a) Finite sample space
 - (b) Infinite sample space
 - (c) Neither finite nor infinite sample space
 - (d) Both finite and infinite sample space
- 37) The set of all possible outcomes when measuring the height of a person is an example of what type of sample space?
- (a) Finite sample space
 - (b) Infinite sample space
 - (c) Neither finite nor infinite sample space
 - (d) Both finite and infinite sample space
- 38) In a game of cards, drawing a card from a standard deck and getting a queen is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 39) In a game of cards, drawing a card from a standard deck and getting a heart or a diamond is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 40) When flipping a coin twice, getting two heads is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 41) When rolling a six-sided die, the die landing on an even number is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment

- 42) When rolling a six-sided die, the die landing on a 5 is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 43) When flipping a coin, the coin landing on tails is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 44) When flipping a coin twice, getting at least one head is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 45) In a game of cards, drawing a card from a standard deck and getting a spade is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 46) When rolling a six-sided die, the die landing on a number greater than 4 is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 47) When flipping a coin twice, getting two tails is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 48) When rolling a six-sided die, the die landing on a 1 is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 49) When flipping a coin, the coin landing on heads is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment

- 50) When flipping a coin twice, getting a head and a tail in any order is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 51) In a game of cards, drawing a card from a standard deck and getting a club is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 52) When rolling a six-sided die, the die landing on a number less than 4 is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 53) When flipping a coin twice, getting a tail and a head in any order is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment
- 54) In a game of cards, drawing a card from a standard deck and getting a heart is an example of what?
- (a) An event
 - (b) An outcome
 - (c) A trial
 - (d) An experiment