What is the probability that a student is taking a Foreign Language?

	Play a Sport	Do not play a sport
Take a Foreign Language	14	23
Do Not Take a Foreign Language	10	3

A. 74%	Go To # 5
B. 61%	Go To # 2
C. 38%	Go To # 12
D. 58%	Go To # 7

2

What is the probability that a student is taking a Foreign Language given that they play a sport?

	Play a Sport	Do not play a sport
Take a Foreign Language	14	23
Do Not Take a Foreign Language	10	3

A. 74%	Go To # 11
B. 61%	Go To # 4
C. 38%	Go To # 3
D. 58%	Go To # 12

3

What is the probability that a student is taking a Foreign Language and not playing a sport?

	Play a Sport	Do not play a sport
Take a Foreign Language	14	23
Do Not Take a Foreign Language	10	3

A. 28%	Go To # 6
B. 80%	Go To # 11
C. 46%	Go To # 4
D. 20%	Go To # 8

4

What is the probability that a student is playing a sport or not taking a Foreign Language?

	Play a Sport	Do not play a sport
Take a Foreign Language	14	23
Do Not Take a Foreign Language	10	3

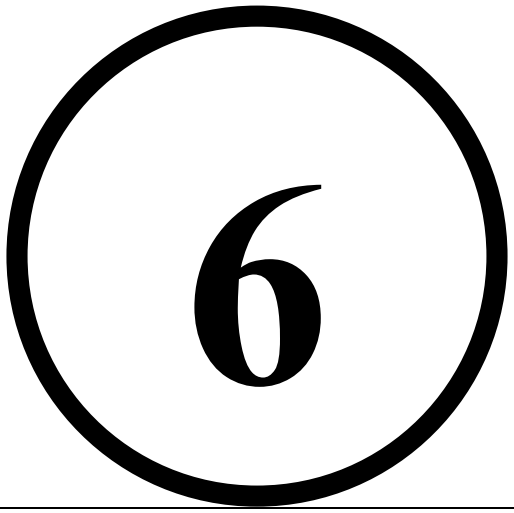
A. 28%	Go To # 10
B. 20%	Go To # 8
C. 74%	Go To # 6
D. 54%	Go To # 11

5

Are these two variables (taking a foreign language and playing a sport) independent?

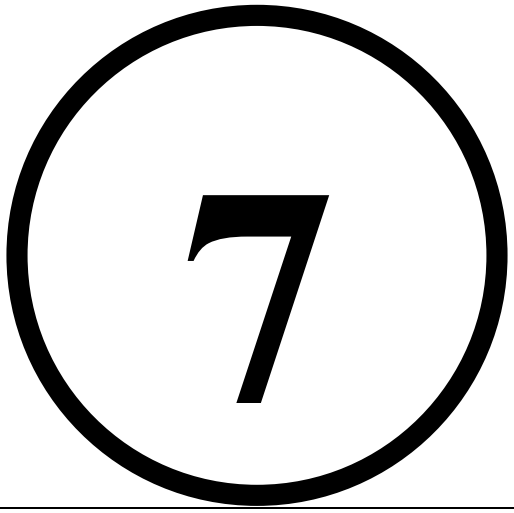
	Play a Sport	Do not play a sport
Take a Foreign Language	14	23
Do Not Take a Foreign Language	10	3

A. Yes, because they don't affect each other.	Go To # 3
B. Yes, because 38% of those that take foreign language play a sport, but 77% of those that don't take a foreign language play a sport.	Go To # 12
C. No, because 38% of those that take foreign language play a sport, but 77% of those that don't take a foreign language play a sport.	Go To # 7
D. No, because 58% of those that play a sport take a foreign language, but only 38% of those that take a foreign language play a sport	Go To # 2



Which events are mutually exclusive when picking a card from a standard deck.

A. Picking a red card and picking a face card.	Go To # 10
B. Picking a spade and picking a seven.	Go To # 1
C. Picking a red card and picking a 10.	Go To # 9
D. Picking a red card and picking a club.	Go To # 8



A jar contains 10 red marbles and 10 blue marbles. What is the probability of choosing a red marble followed by a blue marble (without replacement)?

A. 26.3%	Go To # 2
B. 25.0%	Go To # 4
C. 55.5%	Go To # 12
D. 23.6%	Go To # 3

8

A standard roulette wheel has come up “red” seven times in a row. Which of the following statements is true?

A. “Red” is more likely to come up on the 8th spin since “red” is “hot.”	Go To # 5
B. “Black” is more likely to come up on the 8th spin since it is “due” according to the Law of Large Numbers.	Go To # 9
C. “Red” has the same probability to come up on each spin, assuming the wheel is fair.	Go To # 10
D. “Black” is “due” according to the Law of Averages.	Go To # 1

9

Event A occurs with probability 0.3 and event B occurs with probability 0.4 If A and B are independent, we may conclude

A. P(A and B) = 0.12	Go To # 5
B. P(A|B) = 0.3	Go To # 2
C. P(A or B) = 0.58	Go To # 7
D. All of the above	Go To # 1

10

Event A will occur with probability 0.5 Event B will occur with probability 0.6. The probability that both A and B will occur is 0.1. The conditional probability of A given B

A. is 0.3	Go To # 5
B. is 0.2	Go To # 7
C. is 1/6	Go To # 9
D. cannot be determined from the information given	Go To # 1

11

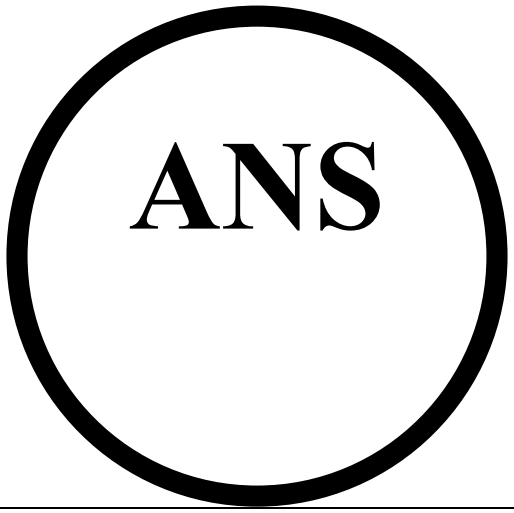
Toss a fair coin 10,000 times. Which of the following statements is true?

A. The number of heads should be very close to 5000.	Go To # 8
B. It is unlikely that there will be more than 5000 heads.	Go To # 10
C. The fraction of heads should be close to 50%.	Go To # 6
D. If there is a streak of 14 heads in a row, it is likely that the coin is unfair.	Go To # 9

12

For events A and B related to the same chance process, which of the following statements is true?

A. If A and B are mutually exclusive, then they must be independent.	Go To # 11
B. If A and B are independent, then they must be mutually exclusive.	Go To # 6
C. If A and B are not mutually exclusive, then they must be independent.	Go To # 4
D. If A and B are independent, then they cannot be mutually exclusive.	Go To # 3



1—5—7—2—12—3—4—11—6—8—10—9—1