1

What is the probability that a student has blue eyes, given that they are left-handed?

	Right-Handedness	Left-Handedness	
Blue Eyes	210	30	240
Brown Eyes	670	90	760
	880	120	1000

A. 30/210	Go To # 10
B. 30/240	Go To # 2
C. 30/120	Go To # 7
D. None of the above	Go To # 4

2

According the table below, are eye color and handedness independent?

	Right-Handedness	Left-Handedness	
Blue Eyes	210	30	240
Brown Eyes	670	90	760
	880	120	1000

A. Yes. The ratio of blue eyed right-handers is the same as the brown eyed left-handers.	Go To # 11
B. Yes. The ratio of blue eyed:brown eyed left-handers is 1:3, and the ratio among righties is 210/670, nearly the same.	Go To # 10
C. No, the ratio of blue eyed right-handers is the same as the brown eyed left-handers.	Go To # 4
D. No, the ratio of right-handers to left-handers is not 1:1.	Go To # 3

3

What is the probability that a randomly selected student is right-handed and has brown eyes?

	Right-Handedness	Left-Handedness	
Blue Eyes	210	30	240
Brown Eyes	670	90	760
	880	120	1000

A. 670/1000	Go To # 11
B. 670/880	Go To # 5
C. 670/760	Go To # 6
D. not enough information	Go To # 8

4

40% of cars in a certain area are manufactured in the US.
30% are from Japan
10% are from Germany
20% are from other countries

If three cars are selected at random, what is the probability that none of the three cars came from Germany?

A. 0.900	Go To # 5
B. 0.999	Go To # 11
C. 0.001	Go To # 8
D. 0.729	Go To # 3

5

40% of cars in a certain area are manufactured in the US.
30% are from Japan
10% are from Germany
20% are from other countries

If three cars are selected at random, what is the probability that at least one of them is US-made?

A. 0.648	Go To # 6
B. 0.784	Go To # 8
C. 0.352	Go To # 9
D. cannot be determined	Go To # 1

6

40% of cars in a certain area are manufactured in the US.
30% are from Japan
10% are from Germany
20% are from other countries

If cars are selected at random, what is the probability that the first Japanese car is the fourth one chosen?

A. 0.0081	Go To # 1
B. 0.2401	Go To # 2
C. 0.3430	Go To # 7
D. 0.1029	Go To # 9

7

40% of cars in a certain area are manufactured in the US.
30% are from Japan
10% are from Germany
20% are from other countries

If 18 cars are selected at random, what is the probability that exactly four are Japanese?

A. $\binom{14}{4} \bullet .3^{4} \bullet .7^{14}$	Go To # 4
B. $\binom{18}{4} \bullet .3^{4} \bullet .7^{18}$	Go To # 10
C. $\binom{14}{4} \bullet .3^{14} \bullet .7^{4}$	Go To # 3
D. $\binom{18}{4} \bullet .3^{4} \bullet .7^{14}$	Go To # 2

8

Game A: win a prize by getting EXACTLY 50% heads

Game B: win a prize by getting between 45% and 55% heads

Your choices:
Flip 20 times or flip 50 times.

Which statement is true?

A. 50 flips for Game A is better than 20 flips, since the Law of Large Numbers says that the longer you flip a coin, the more likely you'll get exactly half heads.	Go To # 1
B. 20 flips for Game B is better than 50 flips, because a smaller sample size will produce a smaller margin for error.	Go To # 7
C. 20 flips for Game A is best, because getting exactly 10 heads out of 20 flips is more likely than getting exactly 25 heads out of 50 flips	Go To # 6
D. Both 20 flips and 50 flips have an equal chance of getting EXACTLY 50% heads.	Go To # 9

9

When rolling 2 dice, what is the probability that the sum is 7 given that one die is a 5?

A. 2/6	Go To # 10
B. 2/12	Go To # 2
C. 2/11	Go To # 1
D. 1/12	Go To # 7

10

If 90% of the households in a certain region have answering machines and 50% have both answering machines and call waiting, what is the probability that a household chosen at random which is found to have an answering machine also has call waiting?

A. 0.56	Go To # 4
B. 0.45	Go To # 11
C. 0.50	Go To # 5
D. 0.44	Go To # 3

11

Which statement is true about independent and disjoint (mutually exclusive) events?

(Assume the two events are related to the same chance process, like picking cards out of a deck.)

A. If two events are independent, then they must be disjoint.	Go To # 8
B. If two events are disjoint, then they must be independent.	Go To # 9
C. If two events are not independent, then they must be disjoint.	Go To # 6
D. If two events are independent, then they cannot be disjoint.	Go To # 5

Key

1
7
2
10
4
3
11
5
8
6
9
(1)