

Conditional Probability Worksheet 1 - Answers

1. You want to know the average number of green M&Ms in a bag of peanut M&Ms. Should you buy regular or peanut M&Ms to answer your question? Peanut.
2. You want to know the number of male aliens that landed in Russia in the 1950s. Can using a sampling population of aliens that landed in the U.S. in the 1950s answer your question?
No. We must assume the two events are unrelated.
3. You are asked a question about the number of roller coasters at a certain amusement park that have blue tracks. If you ride all the roller coasters currently operating and build a list of all the colors of the tracks, do you have enough information to answer the question you were asked?
Yes.

For 4 and 5: All aliens are either male or female. They also have two different skin colors: green and blue.
4. Given a sample of 125 aliens, you find that 75 are female. How many from the sample are male?
50 are male. If they are not female, they must be male.
5. Given a sample of 50 aliens, 25 are male. From those male aliens, 10 are blue. How many from the sample are male and green?
15 aliens are male and green.
6. Given a bag of 60 Skittles with 30 green, 12 orange, and 18 red (red is the best) Skittles, how many are red and green?
None.
7. Given a bag of 60 Skittles with 30 green, 12 yellow, and 18 red (red is the best) Skittles, how many are red or green?
 $30 \text{ green} + 18 \text{ red} = 48 \text{ red or green Skittles.}$
8. A bag of 60 Skittles has only 3 types in it: red, green, and orange. There are 30 green and 18 red Skittles. How many are orange?
There are 12 orange Skittles.
9. You have collected sample of 100 aliens' information. 12 are green, 32 are yellow, and the rest are brown. You also learned that 53 are female and the rest are male. How many aliens are green and not male?
You cannot answer this question. You don't know, from those that are green, how many are male or female.
10. You are bored while waiting in line for your favorite roller coaster. You look at the nearest 10 people to you. From those, 6 are male. From those 6 males, 3 have blonde hair. How many males do not have blonde hair?
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