

Name _____ Date _____

Probability

- 1- A student had to be chosen from Ann's class. There were 11 boys and 11 girls in total in her class. The teacher wrote their names on separate pieces of paper, and then took out one of the papers without looking. What is the probability of selecting a boy?

- 2- Thomas had a bag with 30 marbles: 12 blue, 7 red, 5 white and the rest were gray.
 - a) He took a marble. What is the probability that it is a blue marble?
 - b) If he puts the marble back and takes another one, what is the probability of taking a red one?
 - c) Thomas took a grey marble and didn't put it back. What is the probability of taking another grey marble immediately after that?

- 3- Julie was given two bags full of goodies. There were 10 chocolate bars and 5 mint candies in bag A. There were 7 chocolate bars and 2 strawberry mini-pies in bag B. She wanted to eat a chocolate bar. From which bag should she take the candy (so that the probability of taking a chocolate bar was greater)?

- 4- Mike's class made a project about pets. There were 21 students in his class. Nine had dogs, five had only cats, three had cats and hamsters and the rest had no pets at all. They randomly picked out a name.
 - a) What was the probability that that student had a dog?
 - b) It turned out the student didn't have any pets. They randomly picked out a second name (excluding the first chosen). What was the probability that that student had at least a cat?

- 5- Mr. Johnson taught a music class for 25 students under the age of ten. He randomly chose one of them. What was the probability that the student was under twelve?

- 6- The compact disk Jane bought had 12 songs. The first four were rock music. Tracks number 5 through 12 were ballads. She selected the random function in her Compact Disk Player. What is the probability of first listening to a ballad?

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Answers (Probability):

1. The probability of selecting a boy is $\frac{11}{22}$, so $P = 0.5$.
2.
 - a) The probability of taking a blue one is $\frac{12}{30}$, so $P = 0.4$
 - b) The probability of taking a red one is $\frac{7}{30}$, so $P = 0.23$.
 - c) The probability of taking a gray one is $\frac{5}{29}$, so $P = 0.17$.
3. She should take a candy from bag B, because $P(A) = 0.67 < P(B) = 0.78$.
4.
 - a) The probability that the student had a dog is $\frac{9}{21}$, so $P = 0.43$.
 - b) The probability that the student had at least a cat is $\frac{8}{20}$, so $P = 0.4$.
5. The probability that the student was under twelve was $\frac{25}{25}$, so $P = 1$.
6. The probability of listening to a ballad is $\frac{8}{12}$, so $P = 0.67$.