

## Gen Math - Probability Worksheet



- Two out of a group of four people were selected to form a committee. How many different committees can be formed?
  - 6
  - 8
  - 12
  - 16
  
- A bag contains some marbles. The probability of selecting a blue marble at random from this bag is  $\frac{3}{8}$ . Which of the following, could describe the marbles that are in the bag?
  - 3 blue, 8 red
  - 6 blue, 11 red
  - 3 blue, 4 red, 4 green
  - 6 blue, 5 red, 5 green
  
- In each of three raffles, 100 tickets are sold and one prize is awarded. Mary buys two tickets in one raffle. Jane buys one ticket in each of the other two raffles. Determine who has the better chance of winning at least one prize. Justify your response using probability calculations.
  
- A personal identification number (PIN) is made up of four digits. An example of a PIN is 0229. When all ten digits are available for use, how many different PINs are possible? Rhys has forgotten his four-digit PIN, but knows that the first digit is either 5 or 6. What is the probability that Rhys will correctly guess his PIN in one attempt?
  
- In a drawer there are 30 ribbons. Twelve are blue and eighteen are red. Two ribbons are selected at random.  
What is the probability of selecting a pair of ribbons which are the same colour?
  
- Three-digit numbers are formed from five cards labeled 1, 2, 3, 4 and 5.
  - How many different three-digit numbers can be formed?
  - If one of these numbers is selected at random, what is the probability that it is odd?
  - How many of these three-digit numbers are even?
  - What is the probability of randomly selecting a three-digit number less than 500 with its digits arranged in descending order?

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7. A die has faces numbered 1 to 6. The die is biased so that the number 6 will appear more often than each of the other numbers. The numbers 1 to 5 are equally likely to occur. The die was rolled 1200 times and it was noted that the 6 appeared 450 times. Which statement is correct?

(A) The probability of rolling the number 5 is expected to be  $\frac{1}{7}$

(B) The number 6 is expected to appear 2 times as often as any other number.

(C) The number 6 is expected to appear 3 times as often as any other number.

(D) The probability of rolling an even number is expected to be equal to the probability of rolling an odd number.

8. New car registration plates contain two letters followed by two numerals followed by two more letters eg AC 12 DC. Letters and numerals may be repeated. Which of the following expressions gives the correct number of car registration plates that begin with the letter M?

(A)  $26^3 \times 10^2$

(B)  $25^3 \times 10^2$

(C)  $26^4 \times 10^2$

(D)  $25^4 \times 10^2$

9. Find the probability of getting 2 Heads when two fair coins are tossed?

(A) 1

(B)  $\frac{2}{3}$

(C)  $\frac{1}{2}$

(D)  $\frac{1}{4}$

(E)  $\frac{3}{4}$

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10. A bag contains a large number of red, green and black balls. The player who draws red ball gets 2 points, green 3 points and black 5 points. The player has drawn 4 balls. the product of the point values of the drawn balls are 150. How many black balls he has drawn?
- A. 0
  - B. 1
  - C. 2
  - D. 3
  - E. 4