

1. (3 points) Library/ASU-topics/setCount/sw10_1_7.pg

How many different ways can a race with 8 runners be completed? (Assume there is no tie.)

Your answer is : _____

2. (3 points) Library/UBC/STAT/STAT302/HW01/HW01-03.pg

You have a penny, a nickel, a dime, a toonie, and a loonie. How many different (non-zero) sums of money can you produce?

3. (3 points) Library/UBC/STAT/STAT302/HW01/HW01-04.pg

A woman is about to build her own home computer. She decides she has three different possible brands of chip, four possible hard drives, three choices of RAM manufacturer, and five brands of DVD-writer to consider. How many different ways are there for the woman to build her computer?

4. (3 points) Library/UBC/STAT/STAT302/HW01/HW01-05.pg

A president, a treasurer, and a secretary are to be chosen from a committee with forty members. In how many ways could the three officers be chosen?

5. (3 points) Library/Rochester/setAlgebra38Counting/sw10_2_19.pg

In how many ways can 4 students be seated in a row of 4 chairs if Jack insists on sitting in the first chair?

Your answer is : _____

6. (6 points) Library/Mizzou/Finite_Math/Set_Theory_Addition_and_Multiplication_Principles/MultiplicationPrinciple3.pg

A standard Missouri state license plate consists of a sequence of two letters, one digit, one letter, and one digit. How many such license plates can be made?

A standard New York state license plate consists of a sequence of three letters followed by three digits. How many such license plates can be made?

7. (9 points) Library/Mizzou/Finite_Math/Set_Theory_Addition_and_Multiplication_Principles/MultiplicationPrinciple2.pg

A fair 6-sided die is rolled 8 times and the resulting sequence of 8 numbers is recorded.

How many different sequences are possible? _____

How many different sequences consist entirely of even numbers? _____

How many different sequences are possible if the first, third, and fourth numbers must be the same? _____

8. (3 points) Library/Rochester/setAlgebra38Counting/sw10_2_60.pg

A school dance committee is to consist of 2 freshmen, 3 sophomores, 4 juniors, and 5 seniors. If 6 freshmen, 8 sophomores, 9 juniors, and 7 seniors are eligible to be on the committee, in how many ways can the committee be chosen?

Your answer is : _____

9. (3 points) Library/Mizzou/Finite_Math/Set_Theory_Permutations_Combinations/SeatingArrangements.pg

The CEO of a company has a table in his office which can seat 4 employees. How many seating arrangements are possible if 4 out the 12 employees sit at the table?

10. (3 points) Library/Westmont/EoDM3/Inquiry_4_1/iprob4_3.pg
A *ternary string* is a string made up of 0's, 1's, and 2's. How many ternary strings of length 7 are there?

Number of 7-digit ternary strings = _____

11. (3 points) Library/UMN/algebraKaufmannSchwitters/ks_15_2_25.pg

How many 3-element subsets containing the letter A can be formed from the set $\{A, B, C, D, E, F, G\}$?

Answer: _____

12. (12 points) Library/ASU-topics/setCount/pcount1.pg

A coin is tossed 15 times.

a) How many different outcomes are possible?

b) How many different outcomes have exactly 7 heads?

c) How many different outcomes have at least 2 heads ?

d) How many different outcomes have at most 11 heads?

13. (6 points) Library/ASU-topics/setCount/pcount2.pg

A boy has 3 red , 5 yellow and 2 green marbles. In how many ways can the boy arrange the marbles in a line if:

a) Marbles of the same color are indistinguishable?

b) All marbles have different sizes?
