6.1 The Basics of Counting

6.1 pg 396 # 1

There are 18 mathematics majors and 325 computer science majors at a college.

a) In how many ways can two representatives be picked so that one is a mathematics major and the other is a computer science major?

6.1 pg 396 # 3

A multiple-choice test contains 10 questions. There are four possible answers for each question.

a) In how many ways can a student answer the questions on the test if the student answers every question?

b) In how many ways can a student answer the questions on the test if the student can leave answers blank?

6.1 pg 396 # 7

How many different three-letter initials can people have?

6.1 pg 396 # 9

How many different three-letter initials are there that begin with an A?

6.1 pg 396 # 11

How many bit strings of length ten both begin and end with a 1?

6.1 pg 397 # 25

How many strings of three decimal digits

a) do not contain the same digit three times?

b) begin with an odd digit?