Due on or before Tue, April 10

1. Simplify the following:

a)   
  
b) 

2. A desktop computer manufacture provides custom built models to it’s customers. If the customer is offered the following options:

a) an 80, 120 or 200 GB hard drive  
b) 1 GB or 2 GB RAM memory   
c) a 19” or 25” LCD Display  
d) Conventional DVD +R/RW media burner or Blu-Ray DVD +R/RW media burner  
e) Grey or Black case color

How many different configurations are available to the customer.

3. You witness a hit-and-run accident at a busy intersection. You tell the police that the car was a white Camry. Furthermore you can remember the first 4 characters were 4PQT but you can’t remember the last three characters of the plate although you were sure they were numbers other than 0 (i.e. zero). How many possible vehicle registrations must be sorted to narrow down the suspected perpetrator?

4. On of the ways you make a wager in thoroughbred horse racing is called a Quinela. In placing such a bet you must the select the horses in the field that will finish in first or second place. The order of finish is not important. How many different possibilities for winning the Quinela will exist if there are 7 horses entered the race?

5. In the California Lottery seven numbered balls are drawn at random from 52 balls numbered 1 through 52. The ways of having a winning ticket then is therefore the Combination of 52 things taken 7 at a time or. Using your scientific calculator, compute the odds of having a winning ticket.