1. How many four-digit integers greater than 5000 for which the thousands digit equals the sum of the other three digits?

2. Three basins of a fountain are hemispherical. The top basin has a diameter of 20 cm, the middle basin has a diameter of 60 cm, and the bottom basin has a diameter of 80 cm. When the top basin fills with water, it empties into the middle; and when the middle basin fills with water, it empties into the bottom. Water begins to fill the top basin at a rate of 1000 cm$^3$ per minute. How many minutes will it take to fill all three basins?

3. Jennifer puts 13.5% of the monthly rent from a rental property into an account for repairs and maintenance. She wants the annual rent to be at least $8,330 more than repairs and maintenance. What is the minimum number of dollars she needs to charge for monthly rent to accomplish these goals?

4. The number 135,135 is the product of several consecutive positive odd numbers. What is the greatest of these numbers?

5. Randomly select a number x such that 0 < x < 72. What is the probability that x is the sum of two perfect squares? Express your answer as a fraction in lowest terms.