2022 OWLympiad Sample Quizzo Questions

1.) The digits 2, 2, 3, and 5 are randomly arranged to form a four-digit number. What is the probability that the sum of the first and last digits is even?

2.) Linda wants to distribute 10 apples to three teams, A, B and C. One team can get any integer number of apples, from one to all 10. How many ways does Linda have to distribute these apples?

3.) While taking a leisurely stroll down Montgomery Avenue from 11th St. to 15th St., Viktor passes 12 food trucks. The average daily revenue during April for the first 9 trucks is $1500. The average of the 10th and 11th trucks is $1400, the average of the 11th and 12th trucks is $1350, and the 12th truck alone averages $1100. If the average of all 12 trucks is $1450, what is the average daily revenue in April for the 10th truck?

4.) Stella and Hooter conducted a poll on campus. Students were asked to answer if they were in a club, played a sport, did both, or did neither. Of those polled, they found that 82 students in total play a sport and 128 students in total are in a club. However, 165 students say they neither play a sport nor are in a club. If 325 students were polled, how many students participated in exactly one activity?

5.) Hooter the Owl runs a boutique barbershop on the side. It is a no-frills joint with a singular price of $20 per haircut. Hooter has two part-time employees, Seamus and Rory, who each work 25 hours per week and earn $8.00 per hour, in addition to tips. Seamus works more quickly and gives more haircuts, but Rory receives larger tips. Last week, Seamus serviced 60 customers, while Rory serviced 45. If Seamus received an average tip of 15%, and if he made the same amount of money as Rory last week, what was Rory's average tip?