

General Round

30 minutes

Please put all answers on the provided answer sheet, units are not required.

1. Ariel has n number of seashells. n is a two-digit number that is divisible by 9. When the digits of n are reversed, the number formed is divisible by 5. How many seashells does Ariel have?
2. Winnie-the-Pooh's honey pot is $\frac{5}{8}$ full of honey. He split the rest into three parts and gave one part to each of his two friends, Piglet and Eeyore. He kept the rest for himself in his honey pot and when he went to the store later, doubled what was in his honey pot. How much honey does Winnie-the-Pooh have in his honey pot? Answer as a fraction of his honey pot.
3. Jake Sully has two ways to reach the Tree of Souls. The first way is a 6-mile hike through the forests of Pandora. He can hike 15 mph. The second way is a 10-mile swim through the Northern waters. He can swim 30 mph, except for during the 2 mile stretch when he swims against the currents and can only swim 10 mph. How many minutes faster would it be for Jake Sully to go travel through the forests instead of the waters?
4. In Wonderland, there is a deck of standard playing cards with 26 red cards and 26 black cards. The deck is shuffled. What's the probability that the top card is the same color as the bottom card?
5. Roger has 101 Dalmatians (a species of dog). On average they weigh 50 lbs. One day, Cruella steals 15 Dalmatians. The average weight of the remaining 86 Dalmatians Roger owns is 55 lbs. How heavy is the combined weight of the 15 Dalmatians Cruella owns?
6. How many ways are there to arrange the letters in the word GOOFY such that the two OOs are not next to each other? For example, GOFOY is one possible arrangement but GFYOO is not.
7. Aladdin and the Genie are each given a consecutive positive (not 0) integer. Genie says to Aladdin, "I know you don't know my number, but I do know yours", then Aladdin says "Ah hah! But now I know your number!" What is Aladdin's number?

(Flip to Back)

8. Tinker Bell is painting ladybugs that are numbered 1-999. Every ladybug that has a number with all its digits being even is painted orange. For example, ladybugs 2, 86, and 804 are some of the ladybugs that will be painted orange. All other ladybugs are painted red. How many ladybugs are painted orange?

9. Nemo and Marvin are swimming with a school of moonfish. The number of moonfish surrounding Nemo and Marvin is the smallest possible integer that is neither prime nor square and has no prime factors less than 50. How many moonfishes are there?

10. Tigger's drawer has 6 blue socks, 5 brown socks, and 7 gray socks. He pulls out 4 socks at random. What is the probability that he pulls out at least one matching pair? (A matching pair is considered to be two socks that have the same color)