˳° ✧ General Round ✧ °˳

30 minutes

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

1. Groot and Gamora want to find two numbers that add to 1 and multiply to -72. What is the larger number?

2. The Ewoks have 300 ft of fencing, and want to use it to enclose a space for a farm. What shape of pasture would maximize the amount of space available?

3. For how many three-digit whole numbers does the sum of the digits equal 25?

4. Yoda has nine different books lined up on a bookshelf: two math, three physics, and four science books. How many ways are there to arrange the nine books on the shelf, keeping the math books together and keeping the science books together?

5. Buzz Lightyear needs to unlock a safe with a 3-digit password to defeat Zurg. He discovered a clue: Find the only 3 digit number where it is the same forwards and backwards, and where the sum of the digits is 26. What is the code to the safe?

6. Last year, 100 students attended Starfleet Academy. Of those attending, 52 were boys and 48 were girls. 40 students were from Montana and 60 were from California. 20 of the girls were from Montana. How many of the boys were from California?

7. Four distinct pieces of space candy are to be distributed among 3 bags. The red bag and blue bag must receive at least 1 piece of space candy. The white bag may remain empty. How many arrangements are possible?

8. Captain Kirk can build a computer in 12 months, Mr. Spock can build one in 6 months, Doctor McCoy can build one in 24 months, and Mr. Scott can build one in 8 months. If the four of them all work together, how long will it take them to build 5 computers?

9. Palpatine made a chocolate pie. He was able to eat 1/4 of the pie, and he left the rest for his friends. Darth Vader ate 1/3 of what Palpatine had left behind. After that, Chewbacca stole 1/3 of what Darth Vader had left behind. How much of the original pie still remained after Chewbacca escaped?

10. Arthur Dent usually bikes to work, which is 2 miles away. He travels an average of 5 minutes per mile, but one day his bike broke after going half the distance. He is forced to walk the rest of the way to work at a pace of 15 minutes per mile. What was his average speed (in miles per minute) for the time it took Arthur to get to work?