

Gauss Math Circle Math Tournament
Grade 3 – Grade 4
(50 minutes)

1. What is 87.3 times 9.8?
2. You have three pairs of pants and four shirts. How many outfits can you make out of that?
3. If $x=5$, what is $3x+1$?
4. It takes 7 minutes for Will to run a mile. If Will starts running at 3:35 pm and runs 8 miles, when does Will finish his run?
5. The sides of a triangle are length 43, 48 and 62. What is the perimeter of the triangle?
6. Chuck Norris can turn 5 liters of water into 9 liters of orange juice. How many liters of orange juice can he make out of 15 liters of water?
7. Harry Potter can learn 6 spells in one day. He has two and a half days to study. How many spells can Harry learn?
8. A square has area 25 and side length $x+1$. What is x ?
9. If July 1st is a Tuesday, what day of the week is July 31st?
10. Carmelo Anthony makes 44 percent of his shots. If he takes 50 shots in one game, how many shots does he make?
11. If Sarah Palin hunts 1 moose on Sunday, 2 moose on Monday, 3 moose on Tuesday, and the pattern continues on, how many total has she hunted by the end of Saturday of the same week?
12. The distance between your house and your grandma's house is 45 miles. Your car travels at 30 miles per hour. How many minutes does it take for you to drive from your house to your grandma's house?
13. Billy can fly around the earth in 100 seconds. The circumference of the earth is 29,400 miles. How many miles can he fly in one second?

14. If Wally buys 16 cartons of ice cream and eats half of all of his ice cream each day, how many cartons full of ice cream does he have at the end of 3 days?
15. If Mitt Romney gives Sarah Palin a penny the first day and then twice as much the second day and so on, on what day will he have given her over 20 dollars?
16. How many triangles have as many sides as 12 squares?
17. My 3 pets birds are brothers. The sum of their ages is 25. In 2 years, that sum will be what age?
18. If my florist needs 15 flowers to make 3 special bouquets, then how many flowers would my florist need to make 18 special bouquets?
19. A prime is a whole number greater than 1 that is divisible by only 1 and itself. The greatest prime number less than 50 is?
20. $(100+98+96+\dots+2) - (99+97+95+\dots+1) = ?$
21. If 3 apples weigh as much as 4 pears, and 2 pears weigh as much as 5 plums, then 9 apples weigh as much as how many plums?
22. What time is 62 minutes before 15 hours after midnight?
23. Starting at 2, counting to 200 by 2s, what is the 99th number counted?
24. Chelsea paints twice as fast as Rachelle. If it took Rachelle 6 hours to paint a room, how long would it have taken if both had painted the room together?
25. Timmy buys Claire 100 pieces of candy. Claire eats 40 pieces on the first day. Claire eats 10% of those that are left on the second day. How many are left at the end of the second day?
26. In a class of 21 students, the average sleeping time per night is 8 hours. If 20 of them get an average sleeping time per night of 7.9 hours, how many hours of sleep per night does the last student get?
27. Each player on a football team wears a jersey with a two-digit number between 10 and 99 on it, and each jersey number is a different multiple of 4. At most how many players are on the team?
28. A camp lets each camper choose 2 of 6 available activities. If there are 180 campers, what is the average number of campers in each activity?

29. There are 300 students in a high school. 170 take math and 140 take science while 20 take neither. How many students take both math and science?
30. In 20 years, Li will be 3 times as old as he is now. How old will he be in 10 years?
31. Jake, Max and two of their friends are seated in a row at a restaurant. If Jake can only sit next to Max, how many seating arrangements of the 4 friends are there?
32. The Road Runner ran 200 miles at the speed of 20 miles per hour, walked 40 miles in 20 hours and then ran another 360 miles at the speed of 36 miles per hour. What was its average speed for the whole trip in miles per hour?
33. There are 120 pieces of candy in a bowl. Adam takes a third of them. Then, Ben takes a fourth of what remains. Finally, Cory takes a fifth of what remains after Adam and Ben took their shares. After Cory leaves, David eats the rest of the candy in the bowl. How many pieces of candy did David eat?
34. Aaron knows he has somewhere between 100 and 110 baseball cards in his collection. If he counts his cards 2 at a time, he has 1 card left over. If he counts his cards 5 at a time, he has 2 left over. How many cards are in Aaron's collection?
35. The average (arithmetic mean) of five numbers in a list is 35. The average of the first two numbers is 26. What is the average of the last three numbers?
36. Tom paints $\frac{1}{4}$ of a pole green. Christine then paints $\frac{2}{3}$ of the pole red, and leaves the remaining 2 feet unpainted. How many feet long is the entire pole?
37. How many numbers between 1 and 101 are multiples of 3 or 4?
38. If Mitt has 300 million dollars in the bank account right now and he makes 30% income per year on that money, how many millions of dollars will he have by the end of the year?
39. If the sum of two whole numbers is 12, and half their product is 16, what is their difference?
40. Teacher shares cookies among the students. If each one gets 3 cookies, there are 16 cookie left. If each one gets 5 cookies, they lack 4 cookies. How many children are there in all?

The End