Lincoln Math Competition **Super Sprint MM** Spring 2025

Student name: _____ **Room number:** _____

#	Answer	Points (0/1)
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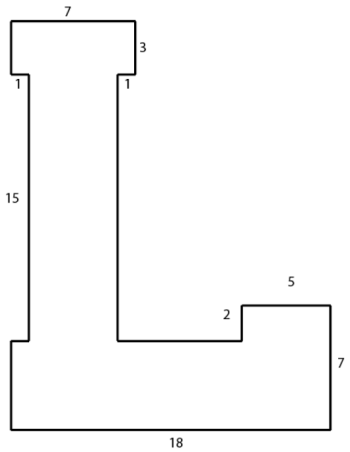
Total:

Problems

1. Sam ate 5 and a half tubs of ice cream and each tub had 16 oz of ice cream. How many ounces of ice cream did he eat in total?
2. What is the value of $1 + 2 + 3 + 4 + 5 + \cdots + 100$?
3. A piece of paper is folded 4 times in a row, hot dog style. How many sections are there when you unfold the paper?
4. Grace chooses a random 3-digit number whose digits are all the same. She then divides the 3-digit number by the sum of the digits of her number. What result does she get?
5. Doctor Doom's minions are working on building ray guns. It takes 2 minions to build a small ray gun in 1 hour, and 3 minions to build a large ray gun in 1 hour. After an hour of work, there were 7 small ray guns and 9 large ray guns. How many of Doctor Doom's minions worked in total?
6. Henry has a pet goldfish and is trying to decide which fish tank to buy. Fish tank A has a square base with a side length of 3 feet and a height of 2 feet. Fish tank B has a length of 4 feet, a width of 2 feet, and a height of 2 feet. How much more water can tank A hold than tank B?
7. How many whole numbers from 1 to 100 inclusive are divisible by 2 but not 5?
8. Brian is tutoring his 4th grade students for the Lincoln Summer Program. Of the 20 students, all of them need help with multiplication, division, or both. There are 14 students who need help with multiplication and 12 students that need help with division. How many students need help with both multiplication and division?
9. What is the next number in the sequence 3, 1, 4, 5, 9, 14, 23?
10. On a sunny day in Seattle, a tall redwood tree casts a shadow that is 45 feet long. Besides it, a 12-inch dandelion casts a shadow that is 5-inches long. How tall, in feet, is the redwood tree?
11. For how many values of A is the 5-digit number A01,036 divisible by 3?
12. How many ways are there to rearrange Andrew, Arman, Aryan, Arshaan, and Aiden in a row if Arman and Arshaan refuse to sit next to each other?
13. The unique smallest angle of an isosceles triangle is 32 degrees. What is the angle, in degrees, of one of the other angles?
14. Ms. Hashemi rolls a 4-sided die, a 5-sided die, and a 7-sided die. What is the probability that they all show the same number?
15. Find the area of the figure below:



16. All the side lengths of hexagon A are multiplied by 3/2 to make hexagon B. What is the ratio of the area of hexagon B to hexagon A?

17. In an intense Lynx Game tournament, 328 contestants must survive Thanos' unpredictable elimination snaps. On each snap, he eliminates exactly half of the remaining contestants (rounded down). However, if the number of remaining contestants is prime, Thanos instead eliminates only 1 contestant. After how many snaps will only 1 contestant remain?

18. Larry is crossing a wood bridge. However, on the bridge, there are decayed pieces of wood that each have a 50% chance of falling and sending Larry into the water below. If there are 20 pieces of wood, and one fourth of them are decayed, what is the chance that Larry falls into the water while trying to cross?

19. Grace is riding a Ferris wheel at a speed of 2π meters per second. The Ferris wheel has a radius of 20 meters. What fraction of the total Ferris wheel circumference has she covered after riding the wheel for 7 seconds?

20. A frog sits at the point (1,2) on the coordinate plane hops 1 unit left, right, up, or down, choosing the direction at random, then repeats this process 2 more times. What is the probability it now sits on the point (2,4)?

21. Bob flips a coin 3 times. Joe flips a coin 4 times. What is the probability that they flip the same number of heads?

22. Andrew has a mug with $\frac{1}{2}$ cup of 4% fat milk. He then adds $\frac{1}{4}$ cup of 2% fat milk to his mug. As a fraction, what is the percentage of fat in the milk now, to the nearest hundredth?

23. A bag contains 12 red marbles, 4 green marbles, and one blue marble. 3 marbles are selected from the bag at random and without replacement. What is the probability that at least 2 are red?

24. Iris is thinking of a random whole number between 1 and 10. Brian guesses 8. If you are guessing next, and Daniel is guessing after you, what number should you guess to have the highest chance of having the closest number? Assume Daniel chooses the number to give himself the highest chance of guessing the number closest to Iris's as well, and Daniel will not pick the same number as you.

25. The polynomial $f(x) = Ax^6 + Bx^5 + Cx^4 + Dx^3 + Ex^2 + Fx + G = x^5 + x^4$. What is $A + B + C + D + E + F + G$?

Answers

1. 88
2. 5050
3. 16
4. 37
5. 41
6. 2
7. 40
8. 6
9. 37
10. 108
11. 3
12. 72
13. 74
14. $\frac{1}{35}$
15. 196
16. $\frac{9}{4}$
17. 10
18. $\frac{31}{32}$
19. $\frac{7}{20}$
20. $\frac{3}{64}$
21. $\frac{35}{128}$
22. 3.33
23. $\frac{55}{68}$
24. 4
25. 2