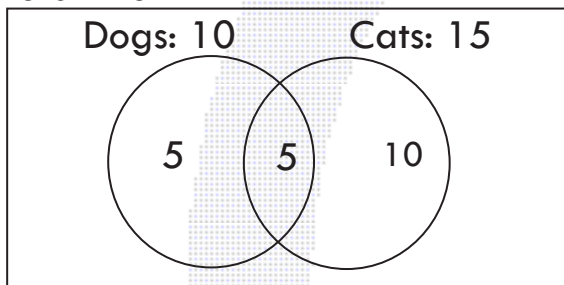


## 2024 Grade One Spirit of Math Contest Solutions

- 1) **C** Regroup the numbers to make the calculation easier:  
 $3 + 8 + 7 + 2$   
 $= 3 + 7 + 8 + 2$   
 $= 10 + 10$   
 $= 20$
- 2) **B** The day before Tuesday is Monday.
- 3) **B** Each new term is created by adding two to the previous number. Therefore, the next term is  $8 + 2 = 10$ .
- 4) **A** There are six flamingos. Since each flamingo has two feet, Eesha counted  $2 + 2 + 2 + 2 + 2 + 2 = 12$  or  $6 \times 2 = 12$  feet.
- 5) **C** The one who is not Shane is Sean, so the other one is Shane.
- 6) **C** There are two blue cars and four red cars. The number of cars that are either blue or red is  $2 + 4 = 6$  cars.
- 7) **D** A square has four sides and a rectangle also has four sides,  $4 + 4 = 8$ .
- 8) **A** There are four stuffies in total, one of which is Ted and another one is on Ted's right. Therefore, there are  $4 - 2 = 2$  stuffies on Ted's left.
- 9) **B** Rephrase the question: "All of them went swimming, except three who did not go swimming." Therefore, three friends did not go swimming.
- 10) **A** There are 20 students in total. However, when adding the 10 students who have dogs to the 15 students who have a cat, it gives a total of 25. This means  $25 - 20 = 5$  students were counted twice.

Total: 20

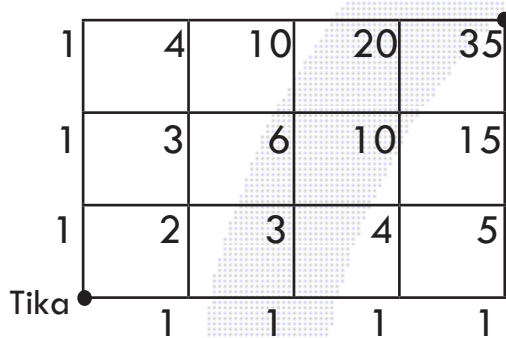


Therefore, five students have both a cat and a dog.

- 11) **A** A) "On which page did Mr. Venn start reading?" is the first logical question you should ask to help solve the problem.  
B) "On which page did Mr. Venn finish?" is given in the question.  
C) "What is the name of the book?" does not help to solve the question.  
D) "Did Mr. Venn finish reading at the top or bottom of the page?" is also given in the question.
- 12) **D** Aneesh needs  $6 \times 2 = 12$  pieces of cake. Therefore, he will need to make  $12 - 1 = 11$  parallel cuts.

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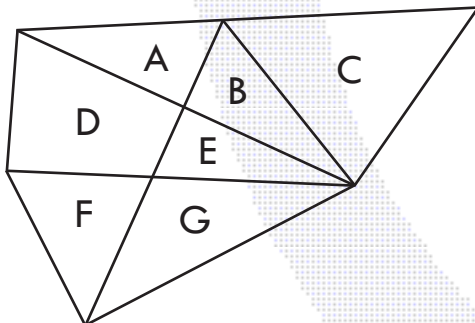
- 13) **C** The first and last digit must be the same, so option A and option B cannot be palindromes. Option D has the same first and last digit but the second and second-last digits are not the same. Since 567765 can be read the same forwards and backwards, option C is a palindrome.
- 14) **B** Each person must have the same number of pencils after sharing, and there are a total of  $4 + 5 + 6 = 15$  pencils. Then they must each have 5 pencils after sharing since  $5 + 5 + 5 = 15$  or  $15 \div 3 = 5$ .
- 15) **C** Each gamer plays one game against each of the five other gamers, meaning that  $5 + 5 + 5 + 5 + 5 + 5 = 30$  or  $5 \times 6 = 30$  games are played. However, in this answer each game is counted twice. Therefore, half of 30 games are played, which is 15 games since  $15 + 15 = 30$  or  $30 \div 2 = 15$ .
- 16) **B** Raoul eats half the pie, which is 8 pieces since  $8 + 8 = 16$  or  $16 \div 2 = 8$ . There are now 8 pieces left. Ren eats half of the 8 pieces, which is 4 since  $4 + 4 = 8$  or  $8 \div 2 = 4$ . There are now 4 pieces left. After Ron eats, there are 3 pieces left. Therefore, Ron ate  $4 - 3 = 1$  piece.
- 17) **D** There are 4 digits in 2023 and 7 days in a week. Multiply the values to get a product of  $4 \times 7 = 28$ . Add the digits to get  $2 + 8 = 10$ .
- 18) **D** Draw a diagram to help you count:



Ben's Icecream

Each intersection is the sum of the two preceding intersections. Therefore, there are 35 ways for Tika to reach Ben's Icecream Shop.

- 19) **A** Since CAT STREET CLAMPS translates to A TREE LAMP, we can conclude that to translate Fibian to English you must remove the outside letters of each word. Therefore, SNOW PLOWS is translated to NO LOW.
- 20) **D** Draw a diagram:



Number of Triangles	Letters	Total
1	A, B, C, E, F, G	6
2	AB, BE, DE, EG, FG	5
3	ABC, BEG	2
		13

There are a total of 13 triangles in the shape.