

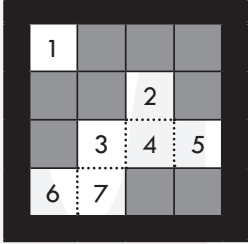
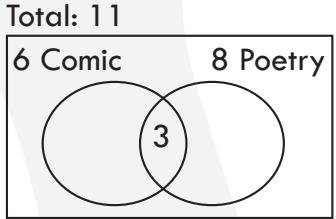
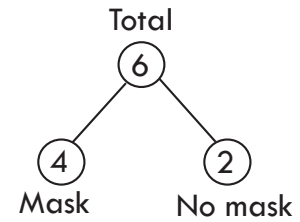


2022 Grade One Spirit of Math Contest Solutions

- 1) **C** Pair up the numbers to make the calculation easier:
 $9 + 1 + 4 + 6 = 10 + 10$
 $= 20$
- 2) **A** A triangle has 3 sides. The only shape with 3 sides shown is option A. Option B is a square. Option C is a pentagon. Option D is a circle.
- 3) **B** Each new term is created by adding two to the previous number. Therefore, the next term is $8 + 2 = 10$.
- 4) **A** The day of the week right after Thursday is Friday.
- 5) **D** In total, Maya and Shirley planted $8 + 7 = 15$ flowers.
- 6) **B** Three days before August 11th is August 8th ($11 - 3 = 8$).
- 7) **D** There are six penguins. Since each penguin has two feet, Elijah counted $2 + 2 + 2 + 2 + 2 + 2 = 12$ or $6 \times 2 = 12$ feet.
- 8) **C** The piece from option C completes the square. 
- 9) **D** Ian is four years older than I am, so Ian is $6 + 4 = 10$ years old.
- 10) **A** From 4:30 p.m. to 4:50 p.m. there are $50 - 30 = 20$ minutes. Lisa spent 20 minutes playing the piano.
- 11) **D** The one that is not the white cat is the grey cat, so the other one is the white cat. 
- 12) **C** Count the missing squares to find out how many pieces were eaten. Therefore, 7 pieces of cake were eaten. 
- 13) **D**
- A) "How long the cucumber is" does not help solve the problem.
- B) "How many parallel cuts Amy needs to make" is already asked in the question.
- C) "How long it takes Amy to cut one piece of cucumber" does not help solve the problem.
- D) "How many pieces of cucumber are needed in total" is the first thing that you need to figure out before solving this question.
- 14) **B** There are $6 + 8 = 14$ students who bought comic or poetry books, but there are only 11 students at the book fair. So, $14 - 11 = 3$ students are counted twice. Therefore, 3 students bought both a comic and a poetry book. 

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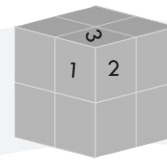
- 15) **A** Rephrase the question: "All children wore a happy mask, except two who did not. Therefore, two children did not wear a happy mask."



- 16) **C** Since each box contains 4 cookies, four groups of 4 cookies can be taken out of a total 19 cookies, and 3 cookies remain. Therefore, Aarav can make four full boxes of cookies with three cookies left over.

- 17) **A** Cate was behind Brie who was behind Ava which means Ava was in front of Brie, and Brie was in front of Cate. Ava was not in front so Dia must be in front. Then the order from the first to the fourth place was Dia, Ava, Brie and Cate. Ava finished in second place.

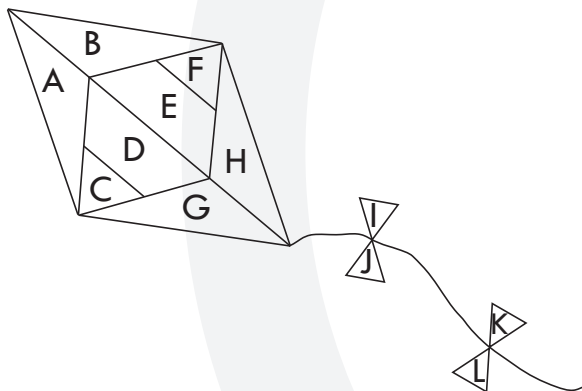
- 18) **D** Each of the eight small cubes have three faces on the surface of the Mega Cube. There are $8 \times 3 = 24$ faces with paint on them.



An alternative solution: each face of the mega cube has 4 small cube faces that are painted. The mega cube has 6 faces. Therefore, there are $4 \times 6 = 24$ faces with paint on them.

- 19) **C** The must be 9 in order to get the 2 in the units column, $9 + 3 = 12$. Then carry over 1 to the tens column which makes $2 + 1 = 3$. The addition problem is $29 + 3 = 32$. The sum of and is $9 + 3 = 12$.

- 20) **C** Label each region of the diagram and make a chart to help you count.



# of letters	Name of triangles	# of triangles
1	A, B, C, F, G, H, I, J, K, L	10
2	CD, EF	2
3	ACD, BEF, CDG, EFH	4
4	ACDG, BEFH	2
	Total	18