Spirit of Math
Releasing the Genius ®

GRADE 4

Spirit of Math
International Contest 2023

INSTRUCTIONS

1 You have 45 minutes to write the contest.

2 The contest is multiple-choice with four choices for each question.

3 Write the CAPITAL letter of the answer you choose on the line to the right of each question and fill in the corresponding circle on the SoM Answer Sheet.

4 Each question answered correctly is worth one mark, and the sum of the correct answers is the score.
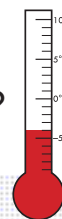
5 Marks are not taken off for wrong answers.

6 No calculators or other counting tools are allowed.

Student Name:

Score: /30

1) $55 - 45 + 28 + 2 + 20 =$

   A) 20   B) 60   C) 80   D) 100   _____

2) What's the next number in this pattern? 12, 19, 26, 33, ___

   A) 39   B) 40   C) 54   D) 60   _____

3) Linda baked 15 cookies for her children. If each of her children gets 3 cookies, how many children does Linda have?

   A) 2   B) 3   C) 4   D) 5   _____

4) This morning at 9 AM, the temperature outside was −4°C. By noon, the temperature had risen by 5 degrees. What was the temperature at noon?

   A) −4°C   B) 0°C   C) 1°C   D) 6°C   _____

5) If you were to put the following numbers in order from least to greatest, which number would be in the middle? 13, 22, −10, 6, 16

   A) 6   B) 16   C) 13   D) 22   _____

6) A palindrome is a number or word that can be read the same forwards and backwards (for example, 2552, or MOM). What digit should be placed at the end of 1434 to make it a 5-digit palindrome number?

   A) 1   B) 2   C) 4   D) 5   _____

7) Cindy-Lu had a hard time deciding between a green mint candy cane, and a red strawberry cupcake as a treat for herself. She chose the treat that was **not** the candy cane. What was the other one?

   A) the candy cane   B) the cupcake   C) neither   D) the apple   _____

Space for rough work

8) Isabelle draws a circle, then she draws a square in the circle so that each vertex of the square is touching the circle. How many regions does this square divide the circle into?

A) 2   B) 3   C) 4   D) 5   _____

9) Jason has a collection of 16 toy cars. All but four of his cars are blue. How many cars are blue?

A) 11   B) 12   C) 13   D) 14   _____

10) A number plus its perfect square is equal to 20. What is the number?

A) 2   B) 4   C) 6   D) 8   _____

11) My birthday is on March 17th! If my birthday is in two weeks from today, what is today's date?

A) March 1st B) March 2nd C) March 3rd D) March 4th _____

12) One day, Pipa decided to create a strange new language! Her language uses only upper-case letters, and only contains words that look symmetrical when written in upper-case. Which of the following would NOT be a word in Pipa's new language?

A) HAH   B) MUUM   C) AVIVA   D) NON   _____

13) Mandeep rolls a 6-sided die, with each face numbered consecutively from 1 to 6. What is the probability that she will roll an odd number?

A) $\dfrac{1}{2}$ B) $\dfrac{2}{3}$ C) $\dfrac{5}{6}$ D) 1   _____
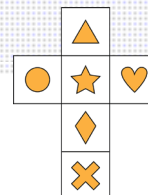

Space for rough work

14) When I turn 25, my mom will be twice that age. How old was my mom when I was 5?

A) 20   B) 25   C) 30   D) 35   _____

15) Six friends exchanged Valentine's Day cards with each other. How many cards were exchanged amongst them?

A) 10   B) 12   C) 20   D) 30   _____

16) One apple weighs about 140 grams. If there are 1000 grams in 1 kilogram, about how many kilograms would 10 apples weigh?

A) 0.14 kilograms   B) 0.28 kilograms   C) 1.4 kilograms   D) 2.8 kilograms   _____

17) My Aunt Allison has a lot of pet dogs and birds! If there are a total of 14 heads and 40 legs amongst her pets, how many birds does she have?

A) 5   B) 6   C) 7   D) 8   _____

18) Emilo made a net for a cube and put a different shape on each face. What shape will be opposite of the circle when he folds the net into a cube?

A) triangle   B) diamond   C) x   D) heart   _____
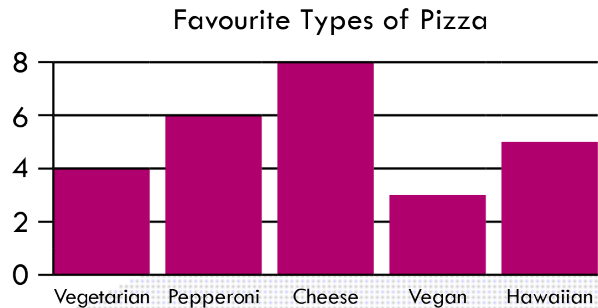

Space for rough work

19) The houses on Tessa's street are numbered consecutively, and are only even-numbered. If the house numbers start at 14 and end at 32, how many houses are on Tessa's street?

A) 9   B) 10   C) 18   D) 20   _____

20) How many different ways can you arrange the letters in the word SPOONS, including the way that spells SPOONS?

A) 60   B) 180   C) 360   D) 720   _____

Favourite Types of Pizza

21) Students in a Grade 4 class took a survey about their favourite types of pizza. Based on the data shown in this graph, which of the following statements is **certain**?

A) Three more students like cheese than Hawaiian.

B) An equal number of students like pepperoni and Hawaiian.

C) Vegetarian was the least popular pizza choice.   _____

D) There are 26 Grade 4 students in total.

22) *Lucy used some magic seeds to plant her garden. She planted 14 seeds in a straight line, leaving a space of 5 inches between each seed. How many inches were there between the first seed and the last seed?*

Which question below requires the correct logical thinking to solve this problem?

A) How many seeds did Lucy plant?

B) How many spaces are there between the first and last seed?

C) When did Lucy plant her seeds?   _____

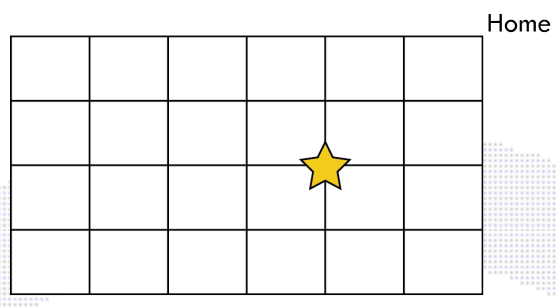D) How many spaces are there between the first and second seed?

Space for rough work

23) One afternoon, Amelie used green and black beads to make bracelets. Fifteen bracelets were made with only black beads, and six bracelets had both black and green beads. If she made 33 bracelets in total that afternoon, how many bracelets were made with only green beads?

A) 12   B) 15   C) 18   D) 21   _____

24) Crystal is flying from Toronto to Vancouver. The flight takes 5 hours, and Crystal's plane takes off at 11:30 AM. If Vancouver time is 3 hours behind Toronto, what is the local time when Crystal's plane arrives in Vancouver?

A) 1:30 AM   B) 1:30 PM   C) 4:30 PM   D) 7:30 PM   _____

25) Lydia leaves her school to head home, but she needs to return a book to the library (⭐) first. If she only walks North and East, how many different ways can she take to get home if she must go to the library first?

A) 15   B) 90   C) 156   D) 210   _____

26) Help Sonia figure out the answer to this equation: XII + IX × VIII = ?

A) 84   B) 92   C) 126   D) 168   _____

27) Grandma noticed that her old vase was broken. She asked her three grandchildren, Alisha, Yujin, and MJ, who broke it. Yujin said "I did it", Alisha said "Yujin and I did not do it", and MJ said "I saw Yujin did it". If only one grandchild told the truth, then who broke the vase?

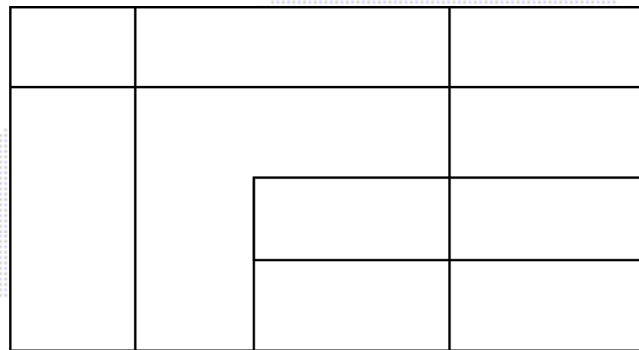A) Alisha   B) Yujin   C) MJ   D) Impossible to tell   _____

Space for rough work

28) Winston is deciding between two streaming services. MovieFlix costs $7 a month for the first 3 months, then $10 a month after that. MoviesPlus costs $70 for an entire year of service. If Winston only keeps his streaming service for 8 months, which option works out to be the least expensive overall?

A) MovieFlix   B) MoviesPlus   C) They both cost the same   D) Impossible to tell   _____

29) Max has a special pen holder for his four favourite pens: red, purple, green, and blue. They are arranged in a certain order. The red pen is to the left of the purple pen and to the right of another pen. The green and blue pen are next to each other. The purple pen is two spots away from the blue pen. Which pen is farthest left?

A) red   B) purple   C) green   D) blue   _____

30) How many rectangles of all sizes can be found in this diagram?

A) 12   B) 24   C) 31   D) 43   _____

_____

Space for rough work

To promote co-operation, inspire confidence and **Release the Genius®** in every child.