Spirit of Math®

Releasing the Genius ®

GRADE 5

International Spirit of Math Contest 2025

INSTRUCTIONS

1 You have **60 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: /40

1) $25 - 5 \times 2 + 12 = ?$

   A) 9   B) 27   C) 52   D) 280   _____

2) A palindrome is a number or word that can be read the same forwards and backwards. What digit should be placed at the beginning of 854582 to make it a 7-digit palindrome number?

   A) 1   B) 2   C) 5   D) 8   _____

3) Which shape comes next in the pattern?

   A)   B)   C)   D)   _____

4) Maya and Mei were 500 m apart. They walked toward each other on a straight path at the same constant speed. Maya walked 120 m and Mei walked 205 m. How far apart are the girls at the end of the walk?

   A) 155 m   B) 165 m   C) 175 m   D) 180 m   _____

5) Ming needs 70 minutes to finish his homework. If he starts working on his homework at 5:15 p.m., at what time will he finish?

   A) 6:00 p.m.   B) 6:20 p.m.   C) 6:25 p.m.   D) 6:45 p.m.   _____

6) While playing a game, Saira stands on the "Start" line. She can move forward five steps if she catches a ball or three steps back if she does not. What would be her final position in respect to the "Start" line if she caught the ball four times and missed it six times?

   A) Two steps forward   C) Two steps backward   _____

   B) Three steps forward   D) Four steps backward

7) What is the next term in this sequence? 19, 22, 28, 37, 49, _____

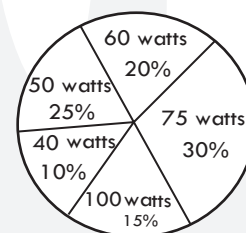   A) 59   B) 61   C) 64   D) 67   _____

Space for rough work

8) Today you have nine gold and three silver fish in an aquarium. In two weeks, your parents will buy you an additional gold fish and two silver fish. They will continue doing the same every two weeks. After how many weeks you will have the same number of gold and silver fish?

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

9) If $2^4 \times 3 \times 5 \times M = 2^5 \times 3^2 \times 5^3$, what is the value of M?

A) 15   B) 30   C) 50   D) 150   _____

10) The sum of a number, its square and its square root is 276. What is the number?

A) 4   B) 8   C) 9   D) 16   _____

11) Benjamin's box has four tennis balls, two ping pong balls, and three pool-table balls. Without looking, he picks one ball from his box. What is the probability that he picks a tennis ball?

A) $\dfrac{4}{9}$ B) $\dfrac{5}{9}$ C) $\dfrac{2}{3}$ D) $\dfrac{7}{9}$ _____

12) Kumar's weight with pants and shoes is 52 kg. The weight of his shoes is 1.5 kg and the weight of his pants is a third of his shoes' weight. What is Kumar's weight without pants and shoes?

A) 48.5 kg   B) 49 kg   C) 49.5 kg   D) 50 kg   _____

13) The number 140 is divisible by which of the following?

A) 21   B) 28   C) 49   D) 77   _____

14) Juan has three wooden sticks. The first stick is 120 cm long. The other two are 90 cm long. What is the average length of Juan's three sticks?

A) 100 cm   B) 110 cm   C) 115 cm   D) 120 cm   _____

15) If a bicycle travels 10 m in 1 second, what is its speed in km/h?
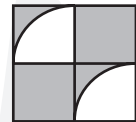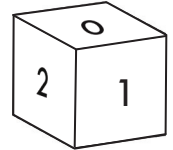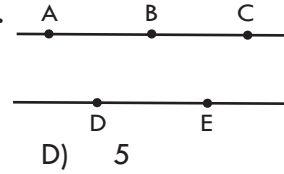
A) 6   B) 12   C) 36   D) 360   _____

Space for rough work

16) A perfect square is a number that can be expressed as a product of the same two integers. How many integers from 1 to 20 are not perfect squares?

A) 14   B) 15   C) 16   D) 17   _____

17) Peter scored 82 on his first two tests of the term. What would he have to score on the third test to have an average of 86 on the three tests?

A) 86   B) 90   C) 94   D) 98   _____

18) In a school of 378 students, the ratio of boys to girls is 4:5. The number of girls in the school is:

A) 168   B) 210   C) 270   D) 302   _____

19) My mom has a black, a white, and a red container on the kitchen counter. Each container only contains one ingredient. One container has chocolate chips, another one has sugar and the third has flour. Sugar is neither in the white nor black container. Flour is not in the white container. Which container has chocolate chips?

A) White   B) Black   C) Red   D) Not possible to determine   _____

20) Which of the following numbers is the greatest number less than 2?

A) $\dfrac{11}{6}$ B) $\dfrac{37}{19}$ C) $\dfrac{18}{9}$ D) $\dfrac{27}{13}$ _____

21) The sum of two numbers is 7 and the product of the same two numbers is 10. What is the sum of their factorials?

A) 62   B) 122   C) 240   D) 5040   _____

22) The sum of two numbers is 330. If the last digit 0 is taken away from the larger of the two numbers, the numbers become equal. What is the value of the smaller number?

A) 10   B) 20   C) 30   D) 33   _____

23) The power of light bulbs is measured in watts. The pie graph shows an inventory of light bulbs in a local hardware store. If the total number of light bulbs is 300, how many have power less than 60 watts?

60 watts 20%
50 watts 25%
75 watts 30%
40 watts 10%
100 watts 15%

A) 45   B) 80   C) 105   D) 120   _____

Space for rough work

24) If the perimeter of a square is 36 cm, then the area of the square, in cm^2 is:

A) 9   B) 4   C) 81   D) 1296   _____

25) Points A, B, and C are on one line. Points D and E are on a parallel line. How many different triangles can be formed using three of the five points as vertices?

A) 11   B) 9   C) 7   D) 5   _____

26) As shown in the image on the right, a regular die has numbers 0 to 5 written on it such that the sum of the numbers on the opposite sides of the die is always equal to five. If the die is rolled and the number viewed from the front is 3 and 5 from the left, what is the number at the bottom of the die?

A) 0   B) 1   C) 2   D) 4   _____

27) The units digit of a number is the right most digit of the number. For example, the units digit of 246 is 6. What is the units digit of the product of $2 \times 3 \times 4 \times 5 \times 6 \times 7 \times 8 \times 9$?

A) 0   B) 2   C) 4   D) 8   _____

28) What is the value of $(1 + 2 + 3 + ... + 9) \div 27 \div 25 \times 3 \times 55$?

A) 5   B) 9   C) 11   D) 33   _____

29) The diagram represents a large square divided into four smaller squares. Which of the following statements represents the correct steps to find the area of the shaded region on the diagram?

A) From the area of the large square take away a quarter of the circle

B) From the area of the large square take away the area of a semi-circle

C) Add the area of half of the large square and the area of a semi-circle

D) Add the areas of the two small squares and the area of a semi-circle

_____

Space for rough work

30) A factory has a packaging machine that has been wrapping candies for 10 hours. The machine can wrap 12 candies every 20 minutes. If the owner of a local convenience store bought 72 of the wrapped candies, what percent of the candies did he buy?

A) 10%   B) 15%   C) 20%   D) 30%   ____

31) A quadrilateral has interior angles A, B, C, and D. Angle A is half the size of angle B and angle B is half the size of angle C. Angles B and D have the same size. What is a measure, in degrees, of angle A?

A) 20°   B) 40°   C) 50°   D) 80°   ____

32) Mao, Nam, and Rob are in a team representing their school in a track-and-field competition. Each of the boys run a part of the field and pass a baton to the next runner. The field is 1.6 km long. Mao ran 40% of the field's length before passing the baton to Nam who ran 20% of the remaining part of the field. Finally, Nam passed the baton to Rob who ran the final part of the field. What is the length of the part of the field run by Rob?

A) 192 m   B) 384 m   C) 640 m   D) 768 m   ____

33) After your school basketball tournament all players from one team gave handshakes to all players from the other team. If one of the teams had one more player than the other and if there were a total of 30 handshakes between the players, how many players were on the team with more players?

A) 5   B) 6   C) 9   D) 10   ____

34) Nathan has a solid wooden cube measuring 5 by 5 by 5. He paints all of its faces green. After the paint dries, he cuts the cube into 125 identical smaller cubes, each 1 by 1 by 1. How many of these smaller cubes have exactly four faces that are NOT painted?

A) 24   B) 27   C) 36   D) 48   ____

35) If the letters A, B, C, D, E, F represent the numbers 1 to 6 in some order, and A + B = C, B + C = D, C + E = F, then what number does C represent?

A) 1   B) 2   C) 3   D) 4   ____

Space for rough work

36) In Cecilia's backyard there are chickens and dogs (no other animals). Among them there is a total of 222 eyes and 266 legs How many dogs does Cecilia have in her back yard?

A) 11   B) 20   C) 22   D) 44   ____

37) The product of all natural numbers from 1 to 25 is divisible by which of the following numbers?

A) 58   B) 93   C) 161   D) 205   ____

38) If you can mow a lawn 90m by 90m in an hour, how long will it take you to mow a lawn 45m by 45m?

A) 10 min   B) 15 min   C) 20 min   D) 30 min   ____

39) When $10^{49} - 2$ is written as a natural number, the sum of its digits is

A) 440   B) 449   C) 450   D) 451   ____

40) Dhruv wants to send a secret message to Anja. He encrypted his message in the following way. Suppose his message is "SEE YOU TOMORROW AT SCHOOL". He writes a message in a matrix, determining the length of a row. If, for example, the length of a row is five, he would write it as:

```
S  E  E  Y  O
U  T  O  M  O
R  R  O  W  A
T  S  C  H  O
O  L
```

Then, he encodes his message by reading off the columns to get: "SURTOETRSLEOOCYMWHOOAO".
When Anja decrypted the message "LMTOSEETRTTEHNOUTEERSACRE" received from Dhruv using the length 5, she got which of the following?"

A) LET'S HAVE LUNCH TOGETHER ANJA   C) LEAVE THE APPLES IN THE BASKET   ____

B) LET US MEET AT THE CORNER STORE   D) LET'S DANCE IN THE EVENING ANJ

Space for rough work

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