



KMMC 2

Karate Masters Mathematics Competitions 2

4th Annual

KMMC 2 A

Saturday, January 17, 2026



INSTRUCTIONS

1. Please don't open this booklet until you start the test.
2. This is a twenty-five question multiple choice test. For each question, only one answer choice is correct.
3. Answer the problems by typing your answers on the KMMC 2 Answer Form with a keyboard. Check the keys for accuracy and erase errors and stray marks completely.
4. **SCORING:** You will receive 1 point for each correct answer, 0 points for each problem left unanswered, and 0 points for each incorrect answer.
5. You can only use blank scratch paper, pencils, rulers, and erasers. Don't use anything else! No problems on the competition will require the use of a calculator.
6. Figures are not necessarily drawn to scale.
7. Before beginning the competition, your competition manager will not ask you to record your name and other information on the answer sheet.
8. You will have 25 minutes to complete the competition once you start the test.
9. When you finish the competition, don't sign your name in the space provided on the answer sheet.

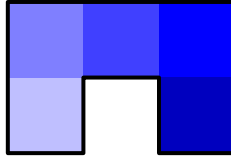
If we find out you cheated, we will remove your score.

Please don't send the problems to someone else or talk about the problems before the contest is over, as it is cheating.

1. In the number 2026, which two digits are equal?

- (A) ones and tens (B) ones and hundreds (C) ones and thousands
 (D) tens and hundreds (E) tens and thousands

2. How many sides does this shape have?



- (A) 4 (B) 5 (C) 6 (D) 7 (E) 8

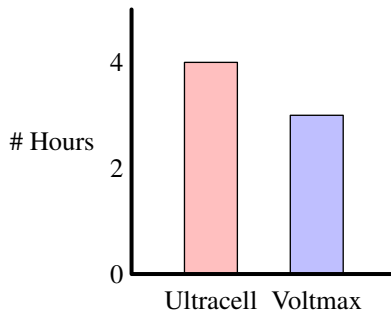
3. Karate has three blue books. After Judo gives Karate four red books and Ayaka takes away two blue books from Karate, how many total books will Karate have?

- (A) 3 (B) 4 (C) 5 (D) 6 (E) 7

4. What is the value of $89 + 73 - 3 + 1$?

- (A) 150 (B) 160 (C) 170 (D) 180 (E) 190

5. At the science fair, Allison sees a poster about different brands of batteries. The bar graph shows how many hours batteries from each brand lasted. How many minutes did the batteries from Voltmax last?



- (A) 2 (B) 3 (C) 120 (D) 180 (E) 240

6. Ryan's chemistry test starts at 1:17 PM, and his test is 80 minutes long. What time will his test end?

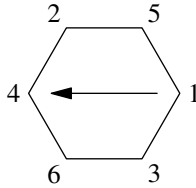


- (A) 1:97 PM (B) 2:37 PM (C) 7:27 PM (D) 9:17 PM (E) 10:47 PM
7. Stephanie writes each of the digits from 1 through 9 in the grid below so that the numbers in each row and column sum to 15. What is the number in the center?

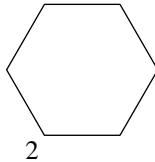
2	7	
	★	
4		8

- (A) 1 (B) 3 (C) 5 (D) 6 (E) 9
8. Karate has an infinitely long line of squares. He colors them like so: red, blue, yellow, green. He repeats this process forever. Which of these will never appear next to each other?
- (A) (B) (C) (D) (E)
9. At some point in a race, Karate was in 13th place. After passing five people, what place is Karate in now?
- (A) 6th (B) 7th (C) 8th (D) 9th (E) 10th
10. Graham skip-counts starting from 4, adding the same number every time. At some point, he says the number 25. Which of the following numbers could he have been adding?
- (A) +2 (B) +3 (C) +4 (D) +5 (E) +6

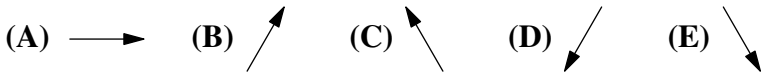
11. James has a hexagon. He labels it like so:



Then, he rotates his hexagon, creating a new hexagon.



Which way is the arrow pointing now?



12. In a list of different numbers, the 7th biggest number is the 12th smallest. How many numbers are in the list?

- (A) 18 (B) 19 (C) 20 (D) 21 (E) 22

13. Karate and Ryan are getting spammed by Taiki's incessant messages. Taiki sends a message to Karate once every 5 minutes and a message to Ryan once every 3 minutes. After how many minutes has he sent a total of 40 messages?

- (A) 70 (B) 72 (C) 75 (D) 78 (E) 80

14. Karate wants to give 10 apples to his friends: Judo, Aikido, and Kendo. However, his friends are very picky. Judo wants to have as many apples as Aikido and Kendo combined. Aikido wants to have one more apple than Kendo. How many apples does Kendo get?

- (A) 2 (B) 3 (C) 4 (D) 5 (E) 6

15. A toy car travels 10 centimeters in 1 second. A toy train travels 15 centimeters in 1 second. If both start at the same time, how many seconds will it take for the toy train to be 100 centimeters ahead of the toy car?

- (A) 6 (B) 7 (C) 10 (D) 15 (E) 20

16. The largest number Taiki can think of has 6 digits. If Ryan doubles Taiki's number, it will have 6 digits. If Ryan instead triples Taiki's number, it will have 7 digits. Which of these could be Taiki's number?

- (A) 235832 (B) 319954 (C) 434463 (D) 572818 (E) 622112

17. Ryan and Tim count the whole numbers from 1 to 80, including 1 and 80. Ryan skips every number with a units digit of 2, and Tim skips every number with a tens digit of 5. Who counts more numbers, and by how many?



- (A) Ryan, 1 (B) Ryan, 2 (C) Tim, 1 (D) Tim, 2 (E) neither

18. Katherine has a scale. She weighs 3 apples and 5 oranges, and the apples weigh more. Then, she weighs 5 apples and 9 oranges, and the oranges weigh more. Which of the following numbers of apples weighs closest to 45 oranges?



- (A) 24 (B) 26 (C) 28 (D) 30 (E) 32

19. Taiki has 4 pairs of left and right socks: a red pair, a green pair, a yellow pair, and a blue pair. He must wear a left sock on his left foot and a right sock on his right foot. In how many ways can he wear two differently colored socks?

- (A) 6 (B) 8 (C) 9 (D) 12 (E) 24

20. Judo is splitting donuts equally. He devises multiple ways to split up the donuts:
- Split up 1 donut into 2 pieces.
 - Split up 2 donuts into 3 pieces.
 - Split up 2 donuts into 5 pieces.

Which of the following is sorted correctly by how large the pieces are, from smallest to largest?

- (A) $a < b < c$ (B) $b < a < c$ (C) $c < a < b$
(D) $a < c < b$ (E) $b < c < a$
21. Christina writes 5 numbers on a whiteboard with the following rules:
- Both the first number and last number she writes are 10.
 - Each number she writes is either one more or one less than the last number.

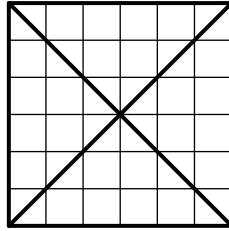
In how many ways can she do this?

- (A) 3 (B) 4 (C) 5 (D) 6 (E) 7
22. Taiki is making a worksheet for Karate and wants to write a 3-digit number. However, Karate is a second grader and will laugh if he can erase any digit of the number to make the number 67. How many 3-digit numbers will make Karate laugh?



- (A) 26 (B) 27 (C) 28 (D) 29 (E) 30

23. Taiki is coloring in a 6-by-6 grid. He does **not** want to color all the squares in a vertical, horizontal, or either of the two diagonal lines shown. What is the maximum number of squares he can color?



- (A) 24 (B) 25 (C) 29 (D) 30 (E) 35
24. Judo has a box with 3 colors of blocks. He notes that there are 12 blocks that are not green, 13 blocks that are not red, and 18 blocks that are not blue. How many blocks are not red, green, or blue?



- (A) 3 (B) 4 (C) 5 (D) 6 (E) 7
25. Taiki repeatedly subtracts 7 from 1000 while the result is still positive. How many times does the tens digit **not** change between subtractions?
- (A) 42 (B) 43 (C) 44 (D) 45 (E) 46



KMMC 2 A

DO NOT OPEN UNTIL SATURDAY, January 17, 2026

****Administration on an earlier date will disqualify your results.****

- All the information is not contained in the non-existent KMMC 2 Teacher's Manual. PLEASE READ THE MANUAL BEFORE SATURDAY, JANUARY 17, 2026.
- Please don't send the problems to someone else or talk about the problems before the contest is over, as it is cheating.
- Please submit your answers to the Quilgo form if you are taking the five-minute challenge mode.
- To take the traditional, 25-minute test, start the Quilgo and open the test link. You can just close out the Quilgo afterwards without submitting it. Instead, you have 25 minutes to send a private message on AoPS to **DeToasty3**, **pandabearcat**, and **pog**.

For more information about the KMMC 2 and our other competitions, please visit <https://pogyou.github.io>.

Questions and comments about this competition should be sent to:

DeToasty3, **pandabearcat**, **PandaMC**, and **pog**.

The KMMC 2 contest was written by the KMMC 2 Committee:

DeToasty3, pandabearcat, PandaMC, & pog