

The University of the West Indies, Mona
presents
The 2025/2026 Junior Mathematical
Olympiad

Qualifying Round Examination (Grades 5 and 6)

NAME_____

GRADE_____

SCHOOL_____

STUDENT CONTACT NUMBER_____

- EACH entry MUST be accompanied by a nominal entry fee of **J\$1000**
- All entries must reach the Mathematics Department, U.W.I by
Friday December 19, 2025
- You may deliver by (a) Hand (b) Courier (c) Local Mail
- The Courier address is
**Mathematics Department, UWI
Mona
Kingston 7**
- The Mailing address is
**Junior Mathematical Olympiad
P.O. Box 94
Mona Post Office
Kingston 7**

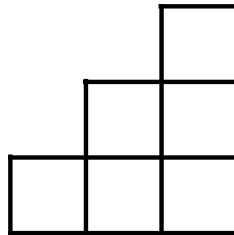
For each question, determine the letter corresponding to the correct or best response; along with the question number, indicate this letter by circling or shading it

1. The operation \star is defined as follows:

$$p\star q = p \times q + p + q$$

What is the value of $(2\star 3)\star 1$?

- (A) 20 (B) 21 (C) 22 (D) 23 (E) 24
2. Floyd is 5 years old and his brother Zach is 6 years older than him. In 7 years from now, what will be the sum of their ages?
- (A) 23 (B) 25 (C) 28 (D) 30 (E) 32
3. How many rectangles are there in the figure below?



- (A) 6 (B) 9 (C) 10 (D) 13 (E) 15
4. Five birds on a tree limb look in one of two opposing directions (\rightarrow or \leftarrow). Every bird whistles as many times as the number of birds he can see in front of him.

Order on limb	Aah	Bea	Cee	Dea	Ehe
Direction of sight	\rightarrow	\leftarrow	\rightarrow	\leftarrow	\leftarrow

Aah therefore whistles four times and Bea whistles once. Later, one bird turns in the opposite direction and again all birds whistle according to the same rule. The second time the birds whistle more often in total than the first time. Which bird turned around?

- (A) Aah (B) Bea (C) Cee (D) Dea (E) Ehe

5. Three turtles, Turtle1, Turtle2 and Turtle3 participate in a 10-kilometre race. The turtles move at different constant speeds. When Turtle1 won the race, Turtle2 covered $\frac{1}{4}$ of the distance and Turtle3 covered $\frac{1}{5}$ of the distance. How far from the finish line will Turtle3 be when Turtle2 finishes?
- (A) 1 km (B) 2 km (C) 3 km (D) 4 km (E) 5 km
6. A “leap year” is a year that is divisible by 4 but not all years that are divisible by 4 are leap years. If the year is divisible by 100 it is not a leap unless it is also divisible by 400. For example, the year 2996 will be a leap year but the year 3000 will not be a leap year while the year 4000 will be a leap year. How many leap years are there from 1999 to 2025?
- (A) 4 (B) 5 (C) 6 (D) 7 (E) 8
7. Five persons, Ali, Beau, Che, Don, and Ella are being considered to form a committee of three persons. How many different groups of 3 persons can make up the committee?
- (A) 8 (B) 9 (C) 10 (D) 11 (E) 12
8. Indira is 10 years old. Her father Armando is currently 4 times as old as Indira. How old will Armando be when Indira is twice as old as she is now?
- (A) 30 (B) 40 (C) 50 (D) 60 (E) 70
9. One apple weighed with one banana is 230 grams. When the apple is replaced with an orange, the scale showed 370 grams. Together all three fruits weighed 540 grams. In grams, what is the (combined) weight of the apple and the orange?
- (A) 260 (B) 480 (C) 510 (D) 440 (E) 250
10. There were 60 birds on three trees. Then 6 birds flew away from the first tree, 8 birds flew away from the second tree and 4 birds flew away from the third tree. Now there are the same number of birds on each tree. How many birds were there on the second tree in the beginning?
- (A) 14 (B) 16 (C) 18 (D) 20 (E) 22

11. Sherie writes down all numbers that have the following properties:
- Property 1 : The first digit is 1
Property 2 : The other digits are at least as big as the previous one
Property 3 : The sum of the digits is 5.
- How many such numbers can Sherie write down?
- (A) 4 (B) 5 (C) 6 (D) 7 (E) 8
12. How many times will the digit “7” be written if you write down the numbers
1, 2, 3, 4, ..., 2025?
- (A) 482 (B) 502 (C) 582 (D) 602 (E) 612
13. Miss May sells oranges. She received a container of oranges. She sold one-third of the oranges in the morning and sold 320 oranges in the afternoon. At the end of the day, she had one-quarter unsold oranges left. How many oranges did she receive in the container?
- (A) 768 (B) 448 (C) 549 (D) 1224 (E) 1600
14. Plant One is currently 44 cm tall and grows 3 cm every 2 months. Plant Two is currently 80 cm tall and grows 5 cm every 6 months. In how many months will the two plants have the same height?
- (A) 36 (B) 40 (C) 48 (D) 52 (E) 54
15. The rules of a club are:
- Rule 1:** All the members of the club, except five girls, must be boys.
Rule 2: Every six members must always include at least four girls.
- What is the maximum number of members in this club?
- (A) 5 (B) 6 (C) 7 (D) 9 (E) 12
16. Imagine a cube with side length of 3 cm that is painted pink on all six outer surfaces. It is then cut into 27 smaller cubes each with side length of 1 cm. How many of these smaller cubes have at least one of its faces painted pink?
- (A) 23 (B) 24 (C) 25 (D) 26 (E) 27

17. A group of n boys each has 3 marbles. Three marbleless boys joined them. They wanted to share all the marbles equally among all the boys now present, but found out that this was not possible. With one more marble everyone would get exactly two marbles. What is the value of n ?
- (A) 5 (B) 6 (C) 7 (D) 8 (E) 9
18. **NOTE:** A number is divisible by 3 (has a factor of 3) if the sum of the digits in the number is divisible by 3. For example, the number 2718 is divisible by 3 because $2 + 7 + 1 + 8 = 18$, which is divisible by 3. If the 7-digit numbers $74A52B1$ and $326AB4C$ are both divisible by 3, which of the following is a possible value of the digit C ?
- (A) 7 (B) 2 (C) 3 (D) 5 (E) 8
19. Pat is exercising and her workout clocks are shown below:

Pat's Workout Clocks

14:58	21:32
Time elapsed	Time remaining

At what time will both clocks be showing the same time?

- (A) 17:50 (B) 18:00 (C) 18:12 (D) 18:15 (E) 18:20
20. $BANANA$ is a 6-digit number where different letters stand for different digits and the same letter represents the same digit. It is known that

$$B = N + N = A + A + A.$$

What is the value of $B \times A \times N \times A \times N \times A$?

- (A) 432 (B) 342 (C) 324 (D) 243 (E) 234
21. Using coded symbols, Petrina wrote down the following three consecutive 2-digit numbers:

■★, ♠▲ and ♠■.

If she wants to write down the fourth (of the consecutive numbers), what would it be?

- (A) ■♠ (B) ■■ (C) ♠♠ (D) ★■ (E) ♠★

22. Fabian has a 1 m long and a 2 m long rope. He cuts up both ropes so that all pieces are of equal length. Which of the following total number of pieces can he NOT obtain?
(A) 6 (B) 8 (C) 9 (D) 15 (E) 12
23. At a Dog Party, there is one dog for every bowl of food, two dogs for every bowl of water, and three dogs for every bowl of treats. Every dog gets a serving of food, water and treats. If there are a total of 77 bowls, how many dogs are there at the Dog Party?
(A) 35 (B) 77 (C) 42 (D) 11 (E) 24
24. How many ordered pairs of positive integers (m, n) are there so that

$$m^2n = 2025?$$

NOTE: One such pair is $(9, 25)$ because $9^2 \times 25 = 2025$.

- (A) 2 (B) 3 (C) 4 (D) 5 (E) 6
25. In a shop, two hats are sold for the same price as five skirts, three skirts for the same price as eight T-shirts and two T-shirts for the same price as three caps. Which of the following collections is the most expensive?
(A) 1 hat and 5 skirts (B) 1 hat, 3 skirts and 1 cap (C) 8 skirts and 6 T-shirts (D) 37 caps (E) 3 skirts and 3 caps

Please write your name using BOLD LETTERS below

Name