

2025-2026 Junior Mathematical Olympiad

Round One Examination (Grades 5 and 6) - 10:00am

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

1. What is the value of

$$2 + 0 \times 2 + 6?$$

- (A) 0 (B) 8 (C) 10 (D) 12 (E) 24

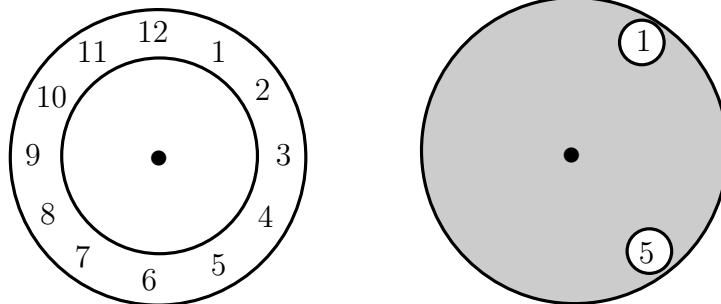
2. In the addition shown below, x and y represent different single digits.

$$\begin{array}{r} 1\ x \\ 2\ x \\ +\ 3\ x \\ \hline y\ 7 \end{array}$$

What is the value of $x + y$?

- (A) 9 (B) 11 (C) 13 (D) 15 (E) 17

3. The diagram below shows the face of a clock and a grey circular card with two holes after placed on the clock-face. The numbers 1 and 5 are clearly shown.



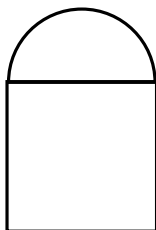
Which of the following pairs of numbers could have been clearly shown (if the grey card is rotated about its centre)?

- (A) 4 and 9 (B) 2 and 10 (C) 5 and 10 (D) 6 and 9 (E) 7 and 12

4. What is the value of $\frac{1}{2} \times 10\% \times 20$?

- (A) 1 (B) 2 (C) 5 (D) 10 (E) 20

5. The figure below consists of a semi-circle and a square as shown. The semi-circle can be coloured in either yellow or red, while the square can be coloured in either blue or green or pink.



In how many different ways can the figure be coloured?

- (A) 2 (B) 4 (C) 5 (D) 6 (E) 8
6. You are given that $2026 = 2 \times 1013$, where 2 and 1013 are prime numbers. How many factors are there in 2026?
- (A) 2 (B) 3 (C) 4 (D) 1013 (E) 2026
7. Lola jogs $1\frac{1}{2}$ km in 20 minutes. Jogging at the same rate, how far can Lola jog in 4 hours?
- (A) 18 km (B) 30 km (C) $22\frac{1}{2}$ km (D) 15 km (E) $1\frac{1}{2}$ km
8. When the number n is divided by 3 or by 4 the remainders are the same. Which of the following could be the value of n ?
- (A) 7 (B) 11 (C) 17 (D) 19 (E) 25
9. Which of the following two-digit positive integers is divisible by the sum of its digits?
- (A) 11 (B) 12 (C) 13 (D) 14 (E) 15
10. Which of the following is NOT a prime number?
- (A) $1^2 + 2^2$ (B) $2^2 + 3^2$ (C) $3^2 + 4^2$ (D) $4^2 + 5^2$ (E) $5^2 + 6^2$
11. A list of one-digit integers contains exactly one 1, two 2s, three 3s, four 4s, five 5s, six 6s, seven 7s, eight 8s and nine 9s. This list is ranked smallest to largest. Part of the list is given below:

1, 2, 2, 3, 3, 3, and so on, 9, 9, 9, 9, 9, 9, 9, 9, 9.

Which number is in the middle of the list?

- (A) 9 (B) 8 (C) 7 (D) 6 (E) 5

19. The letters J , M and O stand for three different single-digit numbers. You are given that

$$J = M + M = O + O + O.$$

What is the value of $M \times O \times J \times O$?

- (A) 432 (B) 216 (C) 108 (D) 94 (E) 72
20. The 8 smallest prime numbers are written in the 8 boxes below so that the result R is a whole number.

$$R = \frac{\square + \square + \square + \square + \square + \square + \square}{\square}$$

What is the maximum value of R ?

Note: The smallest prime number is 2.

- (A) 20 (B) 14 (C) 10 (D) 8 (E) 6
21. Which of the following fractions is closest to 1?
- (A) $\frac{7}{6}$ (B) $\frac{8}{7}$ (C) $\frac{9}{8}$ (D) $\frac{10}{9}$ (E) $\frac{11}{10}$
22. Clayton likes catching fish. On Monday, he realised that if he had caught three times as many fish as he actually did, he would have had 24 more fish. How many fish did Clayton catch?
- (A) 12 (B) 10 (C) 9 (D) 8 (E) 6
23. How many pairs of two-digit positive integers have a sum of 100?
- NOTE:** $35 + 65 = 100$ and so 35 and 65 are counted as 1 pair.
- (A) 11 (B) 21 (C) 26 (D) 36 (E) 41
24. Fried chicken is sold in packets of 3 pieces, 4 pieces and 5 pieces. Simon wants to buy exactly 23 pieces of chicken. In how many different ways can Simon achieve this?
- (A) 8 (B) 7 (C) 6 (D) 5 (E) 4
25. On a balancing scale, $2\otimes$'s balance 1 \square and 1 \blacksquare . Also $2\otimes$'s, 1 \square and 1 \blacksquare balance 1 \square and 4 \blacksquare 's. From lightest to heaviest, the symbols are
- (A) $\blacksquare \otimes \square$ (B) $\blacksquare \square \otimes$ (C) $\square \blacksquare \otimes$ (D) $\square \otimes \blacksquare$ (E) $\otimes \square \blacksquare$