



Mindathon

MMO OLYMPIAD

WORKBOOK

MINDATHON MATHEMATICS OLYMPIAD



By

Ms. Simarpan Kaur

Mindathon Olympiad Foundation

PREFACE

Mathematics is not just a subject but a way of thinking, exploring, and solving problems that challenge our minds. The Mindathon Mathematics Olympiad epitomizes this intellectual pursuit, providing young mathematicians a platform to showcase their talents and expand their understanding.

Our curriculum aligns with the National Curriculum framework's vision, emphasizing holistic growth through critical thinking, hands-on experience, and the development of mathematical skills. We aim to empower learners to engage meaningfully in their educational journey.

This book is designed to offer a stimulating and enriching experience, strengthening mathematical concepts through diverse exercises and challenges. It aligns with curriculum standards and promotes higher-order thinking and problem-solving skills.

Our primary goal is to make learning mathematics enjoyable and rewarding. To eliminate math phobia, each chapter facilitates a progressive learning journey, starting with foundational concepts and advancing to more complex topics. We help students connect mathematics to their daily experiences and present them with challenges to sharpen their skills.

This book also aims to instill a love for mathematics and build confidence. It is designed for students passionate about math, whether preparing for competitive exams or seeking to deepen their knowledge.

Embark on this mathematical journey with an open mind and a spirit of exploration. The joy of mathematics lies not just in finding the right answers but in the thrill of the quest itself. We wish you all the best in your mathematical endeavors. Happy solving!

Key features of the book

- Aligned with the National Curriculum Framework.
- Child-oriented, simple, and effective.
- Concept map for each chapter, linking all the subject topics.
- Chapter-wise summary at the beginning of each chapter.
- Multiple choice questions (MCQs) for concept solving, ranging from easy to moderate and difficult levels.
- Focus on reasoning and aptitude.
- Application-based problems.
- Case studies.
- Mindathon's challenger's zone.
- Hints for difficult problems.
- Sample paper for practice.

Edition : New Edition

© All rights reserved.

No part of the work may be reproduced, stored in retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, microfilming, recording or otherwise without the prior written permission of the publisher.

This book is meant for educational and learning purposes. The author(s) of the book has/have taken all reasonable care to ensure that the contents of the book do not violate any existing copyright or either intellectual property rights of any person in any manner whatsoever. In the event the author(s) has/have been unable to track any source and if any copyright has been inadvertently infringed. Please notify the publisher in writing for corrective action.

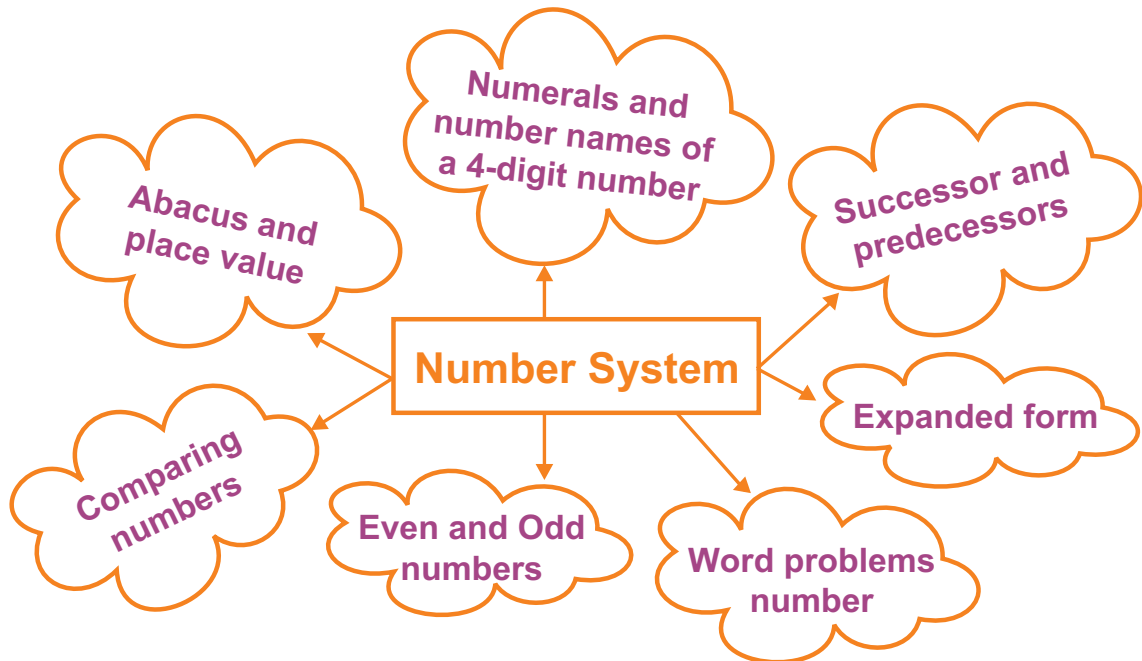
CLASS-3
OLYMPIAD PRACTICE QUESTIONS

CONTENT	Page No.
1. NUMBER SYSTEM	1
2. ADDITION & SUBTRACTION	11
3. MULTIPLICATION & DIVISION	20
4. FRACTIONS	28
5. MEASUREMENTS	38
6. MONEY	47
7. SHAPES	57
8. DATA HANDLING	66
9. LOGICAL REASONING	75
ANSWER KEY	83
SAMPLE PAPER	85

100

1 Chapter

Number System



Summary:

- 1) Smallest 4-digit number = 1000.
Largest 4-digit number = 9999.
- 2) Predecessor is the number which comes before the given number.
Successor is the number which comes just after the given number.
- 3) In ascending order, numbers are arranged from the smallest number to the largest number.
- 4) In descending order, the numbers are arranged from the largest number to the smallest number.
- 5) Even numbers have 0, 2, 4, 6, 8 at their unit's place.
- 6) Odd numbers have 1, 3, 5, 7, 9 at their unit's place.
- 7) An expanded form of a number is the division of numbers based on their place values, for eg. $2876 = 2000 + 800 + 70 + 6$.





Section A: Reasoning and Aptitude

1. Which of the following is the greatest 4-digit number?

(a) 7892

(b) 7982

(c) 9782

(d) 9872

1.

(A)

(B)

(C)

(D)

2. Which of the following place values will determine that the number is the largest amongst the 4-digit numbers.

(a) One's place

(b) Ten's place

(c) Hundred's place

(d) Thousand place

2.

(A)

(B)

(C)

(D)

3. The largest 4-digit number that can be formed using 4, 0, 9, 5 only once is _____.

(a) 9045

(b) 9540

(c) 4095

(d) 9450

3.

(A)

(B)

(C)

(D)

4. The expanded form of 2705 is _____.

(a) $2000 + 70 + 5$

(b) $200 + 700 + 5$

(c) $2000 + 700 + 5$

(d) $2000 + 700 + 50$

4.

(A)

(B)

(C)

(D)



5. Mohit has a collection of 1009 stamps. Express this in word form.

- (a) One thousand nine. (b) One thousand and nine
(c) One hundred nine (d) One thousand ninety

5.

A

B

C

D

6. Which of the following is the correct ascending order of the numbers?

- (a) 2095, 2905, 9025, 9052 (b) 2095, 2059, 9025, 9052
(c) 9052, 9025, 2905, 2095 (d) 2950, 2905, 9520, 9502

6.

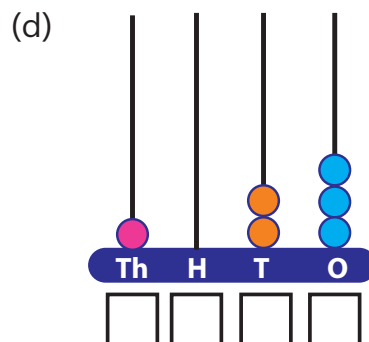
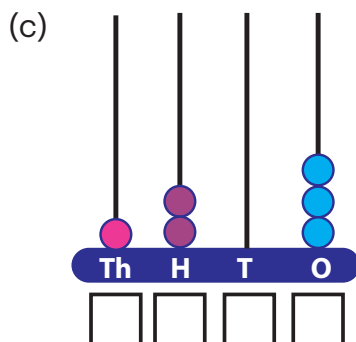
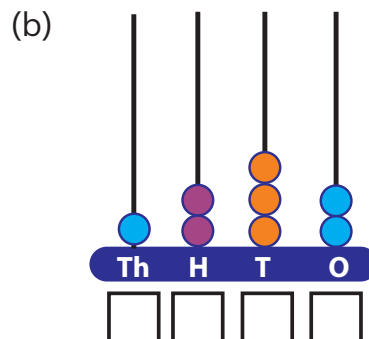
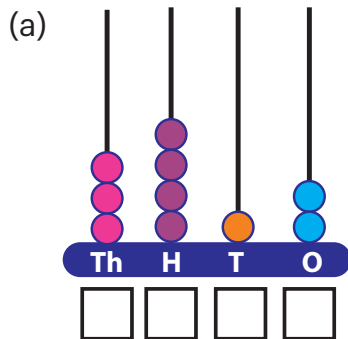
A

B

C

D

7. Which of the following abacus shows the smallest 4-digit number?



7.

A

B

C

D

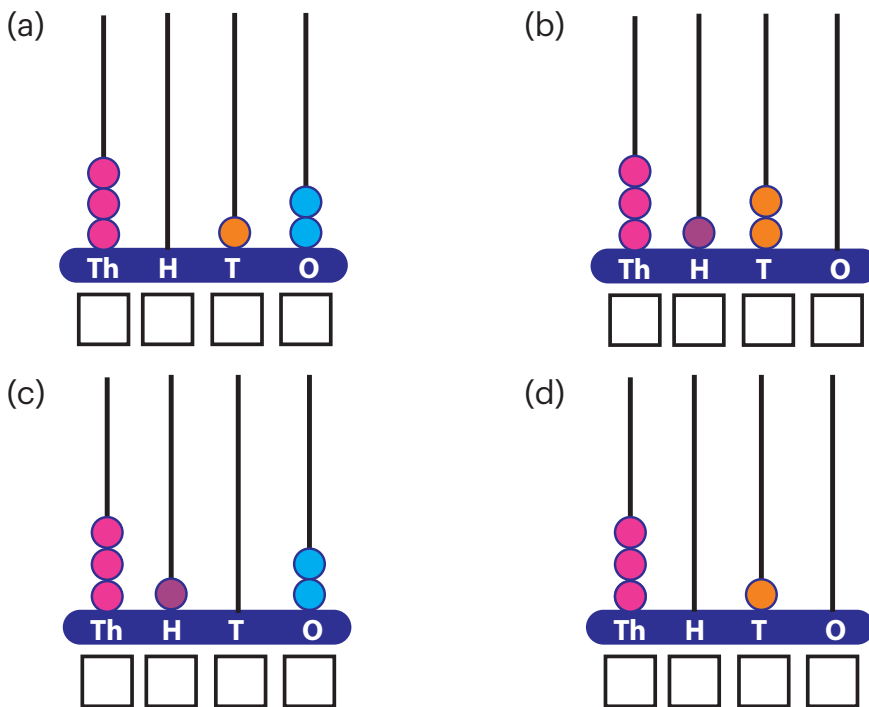


8. Reena lives on street number 709. Thus street number can also be read as:

- (a) Seven thousand nine (b) Seven hundred nine
(c) Seven hundred and nine (d) Seven hundred ninety

8. **(A)** **(B)** **(C)** **(D)**

9. Which of the following abacus “shows two more than three thousand ten”?



9. **(A)** **(B)** **(C)** **(D)**

10. If we form a smallest four digit number using the digits 4, 2, 8, 5, then which digit will come in ones place?

- (a) 2 (b) 8 (c) 4 (d) 5

10. **(A)** **(B)** **(C)** **(D)**



- 11. Which is the largest 4-digit even number formed using the digits 8, 9, 3, 1 only once?**

(a) 9831 (b) 1389 (c) 9138 (d) 9318

11.

A

B

C

D

- 12. What is the place value of 7 where 4 is added to 2893?**

(a) Ones (b) Tens (c) Hundreds (d) Thousands

12.

A

B

C

D

13-15 Have more than two options.

- 13. Which of the following statements is correct?**

- (a) Largest 4-digit number is the successor of 9999.
(b) Smallest 4-digit number is the successor of the largest 3-digit number.
(c) Place value of 3 in 4239 is 30.
(d) Place value of 8 in 6258 is 80.

13.

A

B

C

D

- 14. Rahul has collected 2014 marbles. Another way of expressing 2014 is:**

- (a) Two thousand fourteen. (b) Two thousand and fourteen.
(c) Twenty thousand fourteen. (d) $2000 + 10 + 4$.

14.

A

B

C

D

- 15. 5819 is same as:**

- (a) Fifty eight thousand, one ten and nine.
(b) $58000 + 10 + 9$.
(c) $5000 + 800 + 10 + 9$.
(d) Fifty eight hundred nineteen.

15.

A

B

C

D





Section B: Mathematics in Action

- 16.** Radha was playing with 5 cards where she had to choose any 4 cards to make the smallest 4-digit number. Find that number.

8 0 7 9 3

- (a) 0378 (b) 3078 (c) 9873 (d) 0783

16.

(A)

(B)

(C)

(D)

- 17.** If you are asked to find the largest 4-digit number, using the digits only once, then which digit you will fill in hundreds place.

7 9 8

- (a) 0 (b) 5 (c) 6 (d) 9

17.

(A)

(B)

(C)

(D)

- 18.** Rohan arranged 9875, 9785, 9587, 9857, 9758 in ascending order. Which number will come in the middle.

- (a) 9785 (b) 9758 (c) 9875 (d) 9587

18.

(A)

(B)

(C)

(D)

- 19.** If the tens place is interchanged with the thousand's place, then what will 2687 become?

- (a) 8267 (b) 7682 (c) 8726 (d) 8627

19.

(A)

(B)

(C)

(D)



- 20. Using the digits 2, 0, 7, 5, Meena makes the largest four digit number and Sonali makes the second largest four digit number. Meena's and Sonali's numbers are:**

- (a) 7520, 7250 (b) 7520, 7502
(c) 5702, 7502 (d) 7520, 5720

20.

A

B

C

D

- 21. In an exam, the roll number of Rohit, Vivaan, Sohan and Preeti was 6375, 6428, 6390, 6383. If they have to sit according to their increasing Roll numbers then in which sequence, they will sit?**

- (a) Rohit, Preeti, Sohan, Vivaan (b) Rohit, Preeti, Vivaan, Sohan
(c) Vivaan, Sohan, Preeti, Rohit (d) Preeti, Sohan, Vivaan, Rohit

21.

A

B

C

D

- 22. Find the number formed if the digit at one's place is double the digit at ten's place and the digit at hundred's place is 3 times the digit at ten's place. If 5 is at thousand's place and 2 is at ten's place, find the number.**

- (a) 5642 (b) 5426 (c) 5624 (d) 6542

22.

A

B

C

D

- 23. Anju wanted to make a four digit number by cards, which is two more than the successor of the largest 3-digit number. Find the number.**

- (a) 1002 (b) 992 (c) 1000 (d) 1003

23.

A

B

C

D



24. Mohit says that this house number is less than the largest four digit number but greater than 9990 with 7 at unit's place. What is his house number?

(a) 9997

(b) 9007

(c) 9097

(d) 1007

24.

A

B

C

D

25. Renu wanted to find the smallest 4-digit number using the digits 2, 7, 0, 5, only once. Which digit should she use in hundred's place:

(a) 2

(b) 7

(c) 0

(d) 5

25.

A

B

C

D



Section C: Mindathon Challenger's Zone

26. Which of the following statements is incorrect?

(a) Largest 4-digit number = $1 + 998$

(b) Successor of predecessor of 1000 is 1000

(c) To form smallest 4-digit number from 2, 0, 7, 1, using all digits only once, we should put 0 at thousand's place

(d) 4 thousand and 5 tens = 4050

26.

A

B

C

D



- 27.** I am a four digit even number which is obtain by placing the smallest one digit number at tens place and the largest odd number at hundred's place. The number of side of a triangle is placed at my thousand's place. Who am I?

- (a) 3901 (b) 3908
(c) 3918 (d) 4908

27.

A

B

C

D

- 28.** If $2A7 < 253$ and $219 < 2A7$ then which all digits can be the value of A?

- (a) 2, 3, 4 (b) 1, 2, 3
(c) 3, 4, 5 (d) 0, 1, 2

28.

A

B

C

D

- 29.** Match the following:

Column I

P) Largest 4-digit number - 1

Q) $8000 + 90 + 5$

R) 8 tens 5 thousands

S) Two less than smallest 4-digit number

Column II

M) 8095

N) 998

O) 9998

T) 5080

(a) (P)–(R), (Q)–(M), (R)–(O), (S)–(T)

(b) (P)–(T), (Q)–(O), (R)–(N), (S)–(M)

(c) (P)–(O), (Q)–(M), (R)–(T), (S)–(N)

(d) (P)–(O), (Q)–(M), (R)–(N), (S)–(T)

29.

A

B

C

D



30. How many four digit numbers can be formed using 7, 5, 0, 4 only once in a number

(a) 12

(b) 9

(c) 5

(d) 18

30.

A

B

C

D

HINTS

18. Ascending order is 9587, 9758, 9785, 9857, 9875

