Mindathon

MMO OLYMPIAD
WORKBOOK

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By

Ms. Simarpan Kaur
TGT Mathematics, M.Sc. Mathematics
B.Ed Gold Medalist

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.

CLASS 1
OLYMPIAD PRACTICE QUESTIONS

CONTENT	Page No.

NOTES

Mind Map:

```
                    Identify Number/
                    Count of Objects

    Numbers on                          Number
      Abacus          Number            Names
                      System            Till 100

    Expanded                            Order of
      From                              Numbers

          Skip          Compare         Before &
       Counting         Numbers          After

              Ascending /        In Between
              Descending         Two Numbers
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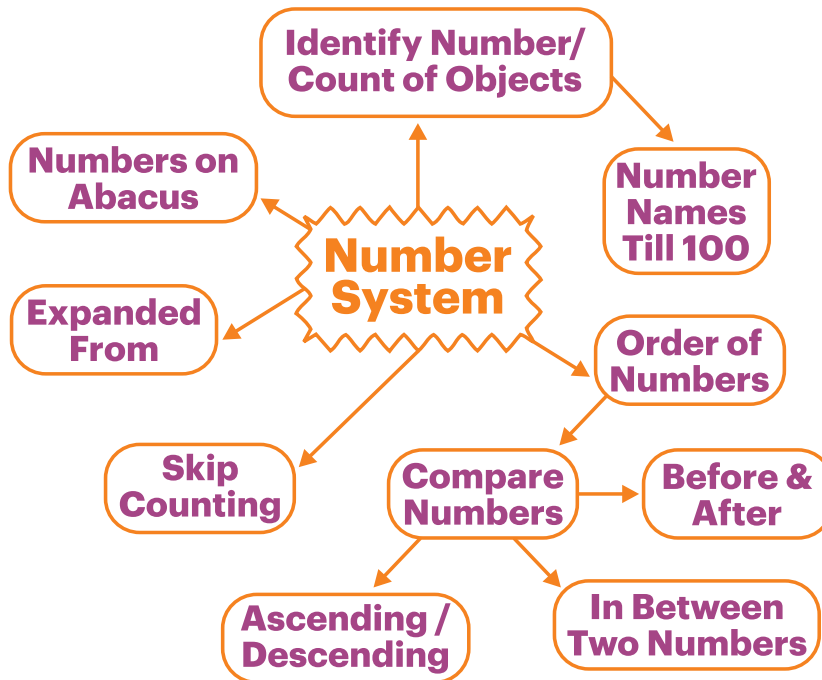
Summary/ Examples:

(1) ⦸⦸⦸⦸ = 4 balls

(2) 89 can be written as eighty nine.

   89 = 8 Tens 9 Ones = 80+9

(3) 42 comes after 41 OR 41 comes before 42

(4) 42 comes between 41 and 43

(5) 28, 47, 35, 87 in ascending order is 28, 35, 47, 87. It's descending
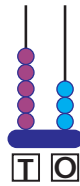   order is 87, 47, 35, 28

(6) Ascending order is smallest to biggest number while descending order is biggest to smallest number

(7) Example of skip counting by 3= 3,6,9,12,15

skip counting by 4= 4,8,12,16,20
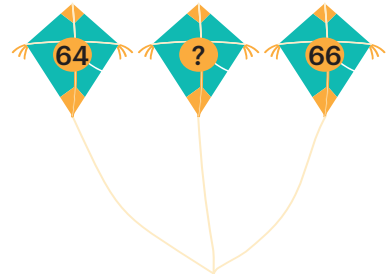
(8) 53 on abacus is   as 53= 5 Tens 3 Ones

T O

Reasoning and Aptitude (With one correct answer)

1.   Which number will come in between the two kites?
(a) Sixty Four   (b) Sixty Five
(c) Sixty Six   (d) Sixty Seven
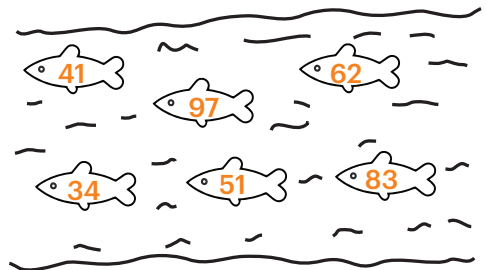
64   ?   66

| 1. | A | B | C | D |

2.   Which fish is not in the pond?
(a) Fifty one   (b) Eighty three
(c) Thirty Seven   (d) Sixty Two

41   62   97   34   51   83

| 2. | A | B | C | D |

3.   Which balls are arranged in descending order?
(a) 27 52 36 41   (b) 52 41 36 27
(c) 27 36 41 52   (d) 27 41 52 36

| 3. | A | B | C | D |

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4. **Which is the number which comes after 89 but before 91?**

(a) 88   (b) 92   (c) 87   (d) 90
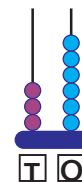
| 4. | A | B | C | D |

5. **Rohit shows the number of Choclates he has through abacus. How many Choclates he has?**

(a) Thirty Six   (b) Sixty Three
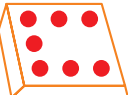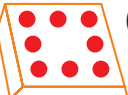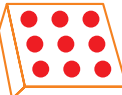
(c) Nine   (d) Thirty Five

| 5. | A | B | C | D |

6. **Which box has least balls in it?**

(a)   (b)   (c)   (d)

| 6. | A | B | C | D |

7. **Which Pair is not correctly matched:**

(a) 42 = Forty two   (b) 93 = Ninety three

(c) 85 = Fifty eight   (d) 71 = Seventy one

| 7. | A | B | C | D |

8. If Meera has 8 ones and 5 tens marbles than how many marbles she has?

(a) 58   (b) 85   (c) 13   (d) 88

8.	A	B	C	D

9. Help Mohan Write the expanded form of 97

(a) 9+7   (b) 90+7   (c) 9+70   (d) 9+10+7

9.	A	B	C	D

10. How will you show the number of eraser with Meenu on abacus?
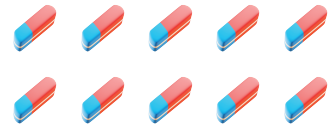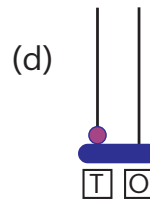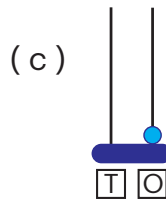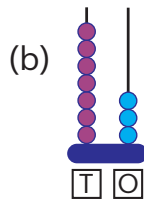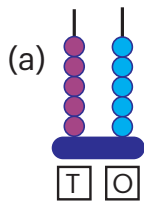
10.	A	B	C	D

11. Rohit has 3 tens 5 ones number. of toffees and Renu has 5 ones 8 tens number of toffees while Komal has 8 tens 3 ones number of toffees. Who has the maximum numbers of toffees?

(a) Rohit   (b) Komal
(c) Renu   (d) All have equal number of toffees

11.	A	B	C	D

12. How many apples are there in this fruit basket?

(a) 8   (b) 6   (c) 5   (d) 7

12.	A	B	C	D
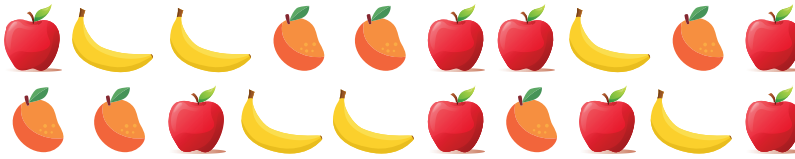
Following Question have more than one correct answer:

13. Which number is less than 37 but more than 29?

(a) 38, 30 (b) 30, 35 (c) 35, 28 (d) 38, 28

13.	A	B	C	D

14. Which of the following is equal to 4 ones and 3 tens?

(a) 34, Forty three   (b) 43, Forth three
(c) 34, Thirty four   (d) Thirty four, Forty three

14.	A	B	C	D

15. Which of the following is incorrectly matched?

(P) Smaller than 37 is 30
(Q) 1 more than 39 is 38
(R) 55 lies between 50 and 55
(S) I less than 42 is 41

(a) Q and R   (b) P and Q   (c) R and S   (d) P and S

15.	A	B	C	D

16. Tripti has a collection of stamps while Raman has a collection of coin. Which of following statement is true?

(a) Stamps are more than coins
(b) Coin are more than Stamps
(c) Number of coins and stamps are equal
(d) Number of coins is 1 more than the number of stamps

16.	A	B	C	D

17. what comes in the number pattern below?

(a) 22   (b) 24   (c) ?   (d) 28
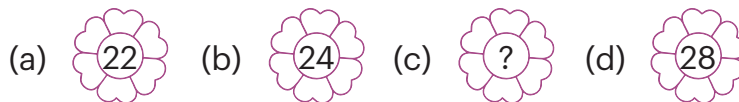
17.	A	B	C	D

18. A rabbit jumps on a line marked from 0 to 15. Where will he land next?
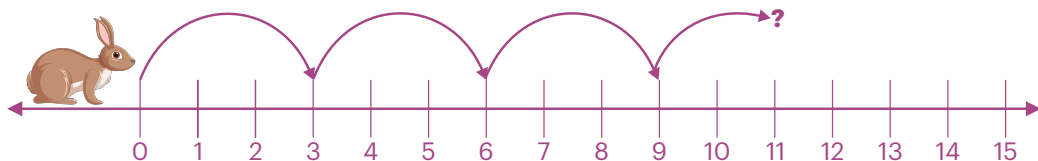
(a) 10   (b) 12   (c) 14   (d) 15

18.	A	B	C	D

10

19. **Which of the following toys is most costly?**

Toy1	Toy2	Toy3	Toy4
₹ 92	₹ 85	₹ 90	₹ 58

(a) Toy2   (b) Toy1   (c) Toy 4   (d) Toy 3

19.	Ⓐ	Ⓑ	Ⓒ	Ⓓ

20. **If a boy has 7 tens & 5 ones number of marbles, then how many marbles he has?**

(a) 12   (b) 57   (c) 75 (d) 705

20.	Ⓐ	Ⓑ	Ⓒ	Ⓓ

21. **Number of** ☆☆☆☆☆ **is___than** ✿✿✿ **flowers.**
(a) One More
(b) One less
(c) Two More
(d) Two less

21.	Ⓐ	Ⓑ	Ⓒ	Ⓓ

22. **I am a number which is not more than 81 but not less than 80 then who am I , if I am not 81?**
(a) 81   (b) 80   (c) 82   (d) 79

22.	Ⓐ	Ⓑ	Ⓒ	Ⓓ

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23. **Which is the following is greatest?**

(a) 23 Ones   (b) 3 Tens 2 Ones   (c) 2 Tens 2 Ones   (d)Thirty three

| 23. | A | B | C | D |

Mindathan Challenger's Zone

24. **If A= Forty seven,   B= 4 Tens 4 Ones, C= 78,   D= 7 Tens 4 Ones than the descending order is**

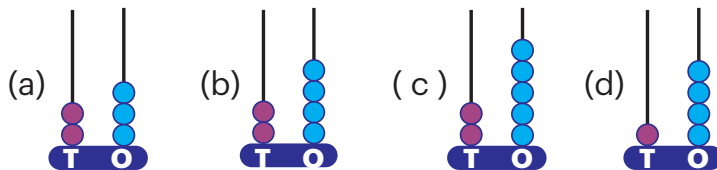(a) A,B,C,D   (b) DCBA   (c) B,A,D,C   (d) C,D,A,B

| 24. | A | B | C | D |

25. **Which one of the following abacuses represents the number before 2 tens 4 ones**

(a)   (b)   (c)   (d)

| 25. | A | B | C | D |

26. **Which of the boxes has same number of balls.**

1.   2.   3.   4.
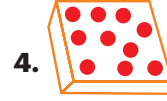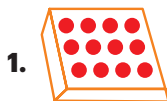
(a) Box 1 and 2   (b) Box 2 and 3   (c) Box 3 and 4   (d) Box 1 and 4

| 26. | A | B | C | D |

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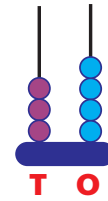**27.** **What is the number formed if one balls drops from the tens colums of the given abacus.**

(a) Thiry Four   (b) Thirty three
(c) Twenty four   (d) Twenty Three

27.	A	B	C	D

T O

28. **Identify the correct statement**

(a) 15 ones is same as 1 ten 5 ones
(b) 09 and 90 are equal
(c) 20 ones comes after 20
(d) 3 ten 4 ones comes between 34 and 36

28.	A	B	C	D

29. **Find the missing number:**

3 tens → 34 → 3 tens 8 Ones → ( )

(a) 38   (b) 40   (c)42   (d) 44

29.	A	B	C	D

30. **If the some rule is followed in P,Q,R then find the missing number.**

1	2
4	3

P

2	4
8	6

Q

3	6
?	9

R

(a) 6   (b) 12   (c) 10   (d) 15

30.	A	B	C	D

13

HINTS

11. Rohit has 35 toffees
Renu has 85 toffees
Komal has 83 toffees

22. 80 and 81 are numbers. Which are not more than 81 and not less than 80.

24. A = 47
B = 44
C = 78
B = 74

25. Number before 24 = 23

26. Box 1 has 12 balls
Box 2 has 12 balls
Box 3 has 11 balls
Box 4 has 10 balls

29.
30   34   38   42
+4   +4   +4

30.

	+1		+2		+3
1	2	2	4	3	6
4	3	8	6	?	9