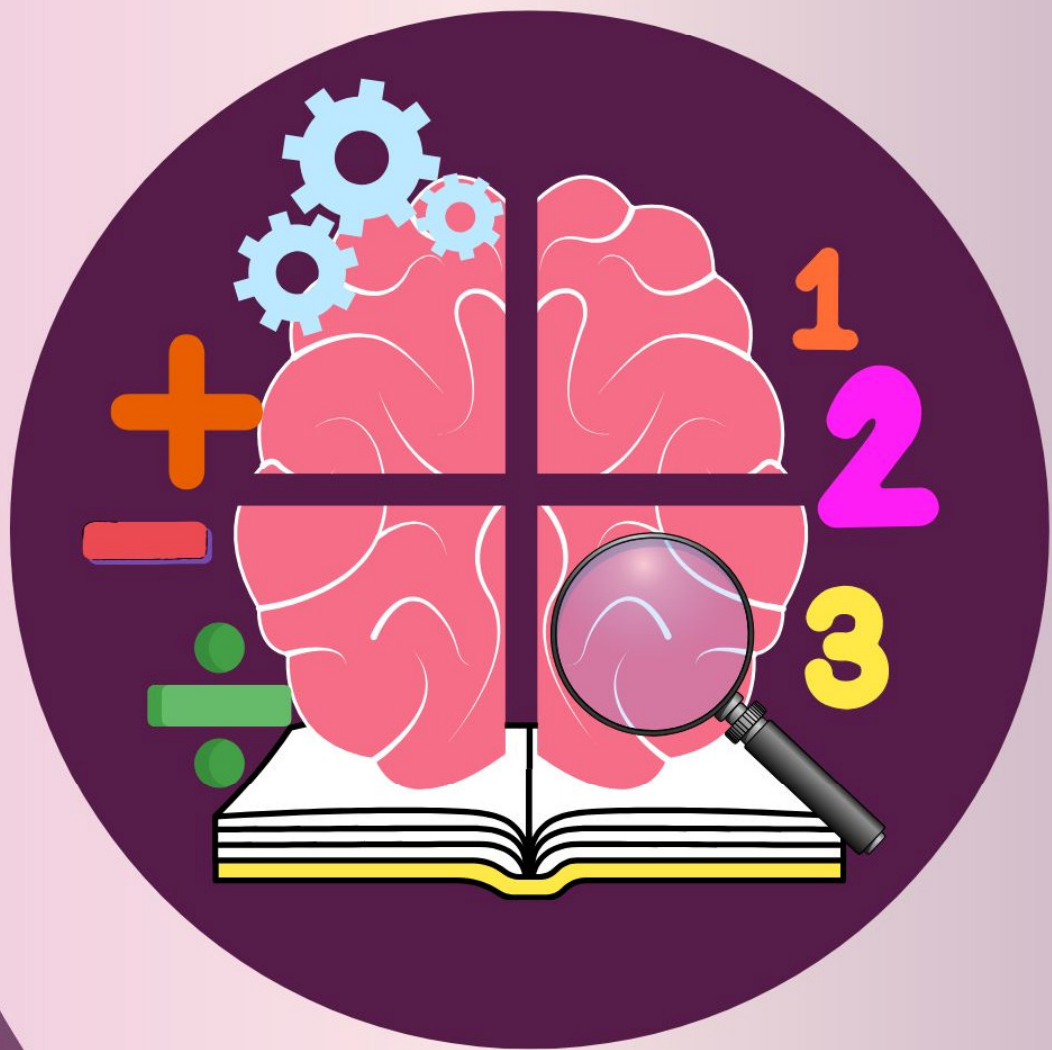


MENTAL MATHS WORKBOOK

For the preparation of National
& International Competitions



- Chapter-wise practice exercises
- Previous year paper

Mental Maths Competitions

Preparation Book

Grade 3



#CRESTInnovator

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CREST Mental Maths Olympiad (CMMO) Workbook for Grade 3

First Edition

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Disclaimer: The information in the Workbook is to give you the path to success but it does not guarantee 100% success as the strategy is completely dependent on its execution.

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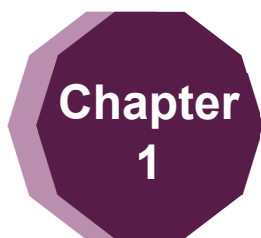
Preface

We are pleased to launch first edition of this workbook. We welcome feedback from students, teachers, educators and parents. For improvements in the next edition, please send your suggestions at info@crestolympiads.com. Our team will make an effort to work on those suggestions.

CREST Olympiads is one of the largest Olympiad Exams with students from more than 60 countries. The objective of these exams is to build a competitive spirit while evaluating students on conceptual understanding of the concepts.

We strive to provide a superior learning experience, and this workbook is designed to complement the school studies and prepare the students for various competitive exams including the CREST Olympiads. This workbook provides practice questions on the topics. These questions encourage the students to think analytically, to be creative and to come up with solutions of their own. There is a previous year's paper given at the end of this workbook for the students to attempt after completing the syllabus. This paper should be attempted in 1 hour to get an assessment of the student's preparation for the final exam.

Publishers



Numbers and Number Names

1. Adam had a collection of 964 stickers. Which of the following options correctly gives the number of stickers he has?

a. Nine six four
b. Nine hundred four
c. Nine hundred sixty
d. Nine hundred sixty-four

2. Which of the following shows the expanded form of 527?

a. $500 + 27$ b. $500 + 20 + 7$
c. $520 + 7$ d. $50 + 27$

3. Which of the following numbers is correctly matched to its number name?

a. 253: Two hundred fifty-three
b. 658: Sixty-five eight
c. 475: Four hundred seven five
d. 719: Seven hundred ninety

4. What is the expanded form of the number "seven hundred sixty-two"?

a. $70 + 62$ b. $700 + 62$
c. $700 + 60 + 2$ d. $760 + 2$

5. Which of the following has the least value?

P: Five hundred two
Q: Five hundred seventy-three
R: Five hundred thirty-six
S: Five hundred nineteen

a. P b. Q
c. R d. S

6. Match the following.

	Column A		Column B
1.	$200 + 9$	a.	271
2.	$200 + 10 + 7$	b.	209
3.	$200 + 60 + 7$	c.	217
4.	$200 + 70 + 1$	d.	267

a. $1 - d, 2 - c, 3 - b, 4 - a$
b. $1 - b, 2 - c, 3 - d, 4 - a$
c. $1 - b, 2 - a, 3 - d, 4 - c$
d. $1 - b, 2 - d, 3 - c, 4 - a$

7. What is the number name of 29 more than the least three-digit number?

a. One hundred twenty-nine
b. Seventy-one
c. One hundred nineteen
d. Nine hundred twenty-nine

8. Which of the following numbers is not matched correctly to its expanded form?

a. 438: $400 + 30 + 8$
b. 718: $700 + 10 + 8$
c. 650: $600 + 50$
d. 397: $300 + 97$

9. What is the number name of the successor of the greatest 3-digit number?

a. Nine hundred ninety
b. Nine hundred ninety-nine
c. One thousand
d. Nine hundred ninety-eight

10. What is the number name for the predecessor of the number whose expanded form is $400 + 30$?

- a. Four hundred thirty
- b. Four hundred twenty-nine
- c. Four hundred thirty-one
- d. Four hundred twenty




11. Which of the following numbers represents 3 hundreds 38 ones?

- a. 38
- b. 308
- c. 338
- d. 380

12. Which of the following is the same as 2 hundreds 7 tens 4 ones?

- a. 2 hundreds 6 tens 14 ones
- b. 2 hundreds 5 tens 14 ones
- c. 2 hundreds 6 tens 24 ones
- d. 2 hundreds 4 tens 24 ones

13. What is the number represented in the picture?

Hundreds	Tens	Ones
		

- a. 247
- b. 427
- c. 472
- d. 742

14. Fill in the blank.



519 = ___ hundreds ___ tens ___ ones



- a. 1, 5, 9
- b. 5, 1, 9
- c. 5, 9, 1
- d. 9, 5, 1

15. Which of the following is the greatest in value?

- a. 5 hundreds 21 tens 14 ones
- b. 6 hundreds 14 tens 28 ones
- c. 6 hundreds 11 tens 39 ones
- d. 6 hundreds 17 tens 2 ones

16. What is the predecessor of 7 hundreds 24 tens?

a.  b. 

c.  d. 

17. Identify the 3-digit number based on the given clues.

- The sum of the hundreds place digit and the ones place digit is 11.
- The tens place digit is 0.
- The hundreds place digit is 5 more than the ones place digit.

- a. 308
- b. 407
- c. 704
- d. 803

18. Adam's score in a video game is 18 tens more than 4 hundreds 29 tens 14 ones. What is his score?

a.  b. 

c.  d. 

19. In a farm, the total number of mangoes borne were 117 less than 3 hundreds 23 tens. How many mangoes were borne in the farm?

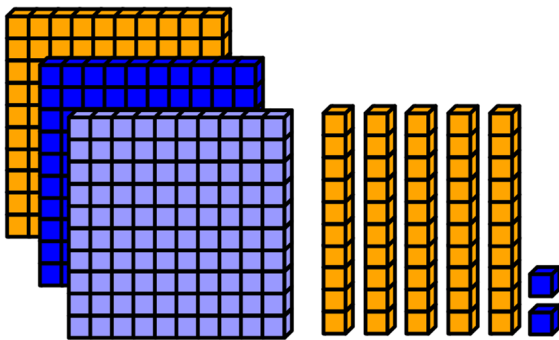
a.  b. 

c.  d. 

20. Which of the following is NOT the same as 3 hundreds 5 tens 7 ones?

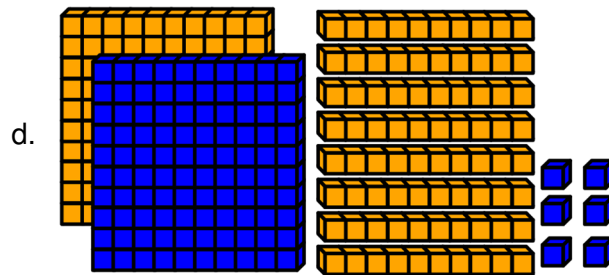
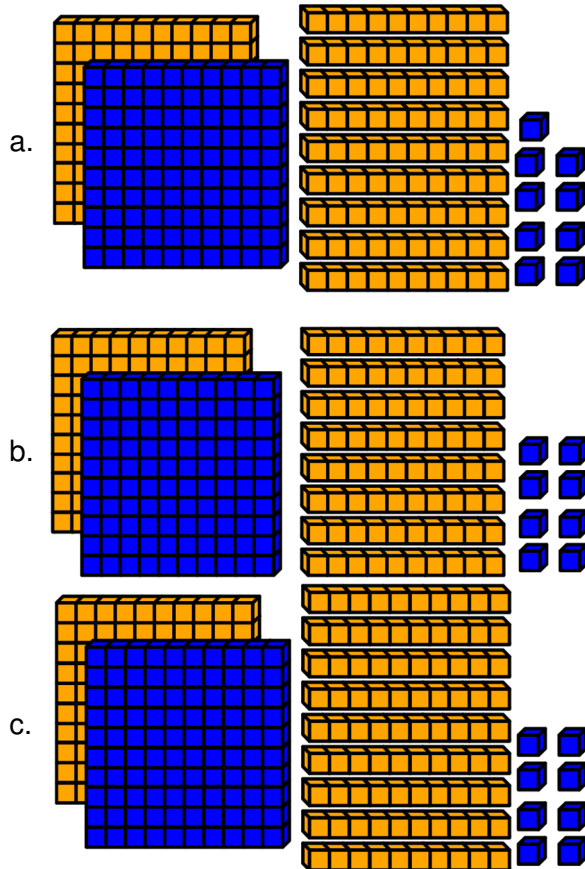
- a. 3 hundreds 14 tens 17 ones
- b. 2 hundreds 12 tens 37 ones
- c. 2 hundreds 11 tens 47 ones
- d. 1 hundreds 25 tens 7 ones

21. What is the number shown on the picture?

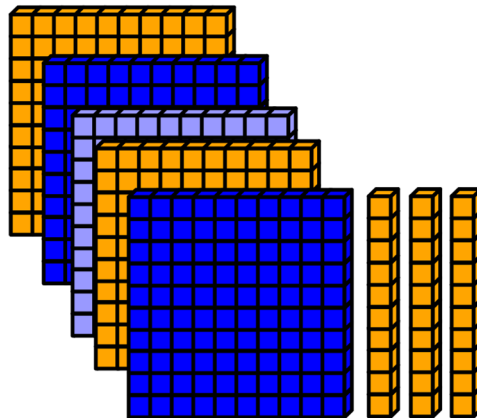


- a. 253
- b. 352
- c. 523
- d. 532

22. Which of the following shows 298?

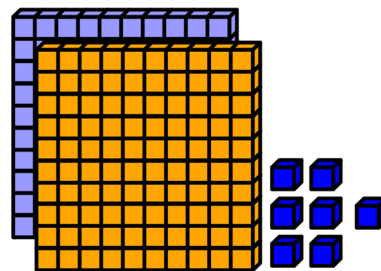


23. What is the predecessor of the number shown here?



- a. 349
- b. 529
- c. 530
- d. 531

24. Which of the following options correctly represents the number shown in the picture?



	Hundreds	Tens	Ones
a.	2	0	7

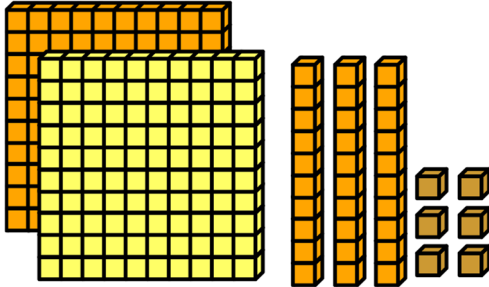
	Hundreds	Tens	Ones
b.	2	7	0

	Hundreds	Tens	Ones
c.	7	0	2

d.

Hundreds	Tens	Ones
7	2	0

25. What is the number name of the successor of the number shown here?



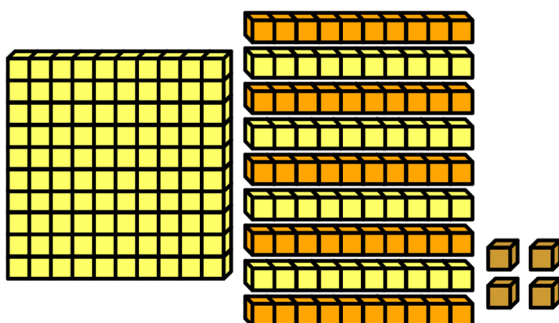
- Three hundred twenty-seven
- Two hundred thirty-six
- Two hundred thirty-seven
- Two hundred thirty-five

26. Match the following.

	Column I		Column II
1.	3 hundreds + 52 ones	a.	298
2.	200 + 9 tens + 8 ones	b.	507
3.	5 hundreds + 7 ones	c.	352

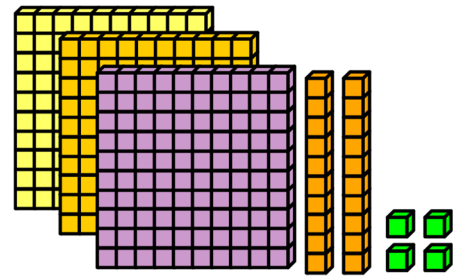
- 1 – c, 2 – a, 3 – b
- 1 – c, 2 – b, 3 – a
- 1 – a, 2 – c, 3 – b
- 1 – b, 2 – a, 3 – c

27. What is 119 more than the number shown here?



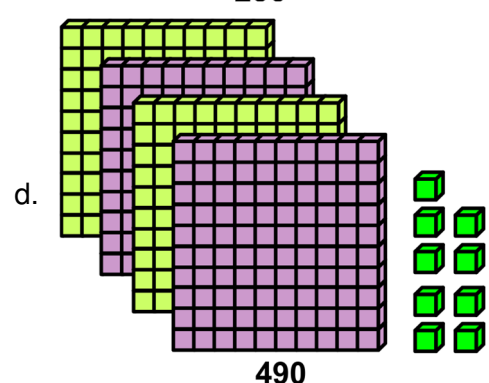
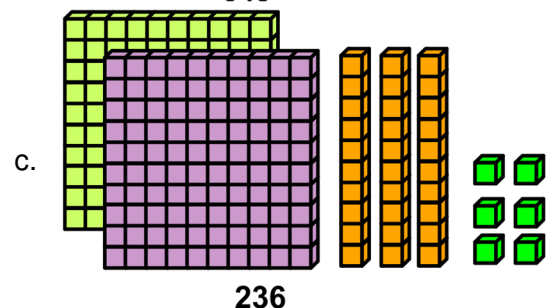
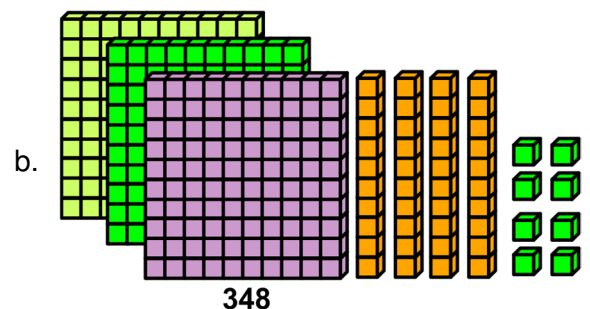
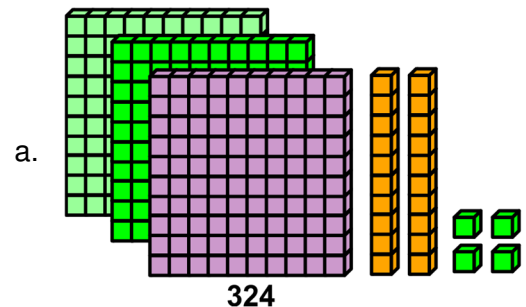
- 203
- 213
- 303
- 313

28. What is one hundred seven less than the number shown here?

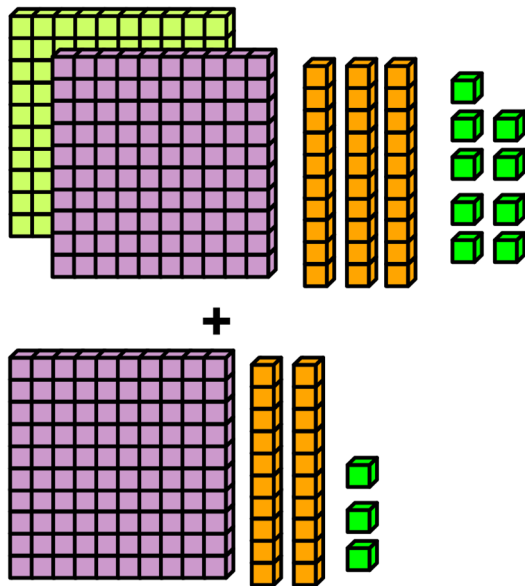


- 217
- 218
- 227
- 228

29. Which of the following is NOT matched correctly?



30. What is the result of the given addition?



- a. 351 b. 352
c. 361 d. 362

31. Which of the following shows the correct ascending order of the numbers?

- a. $217 < 209 < 235 < 296$
b. $209 < 217 < 235 < 296$
c. $217 < 209 < 296 < 235$
d. $296 < 209 < 235 < 217$

32. Which of the following shows the correct descending order of the numbers?

- a. $538 > 512 > 423 > 493$
b. $538 > 512 > 493 > 423$
c. $512 > 538 > 423 > 493$
d. $512 > 538 > 493 > 423$

33. Arrange the given number names in ascending order.

P: Five hundred twenty-seven

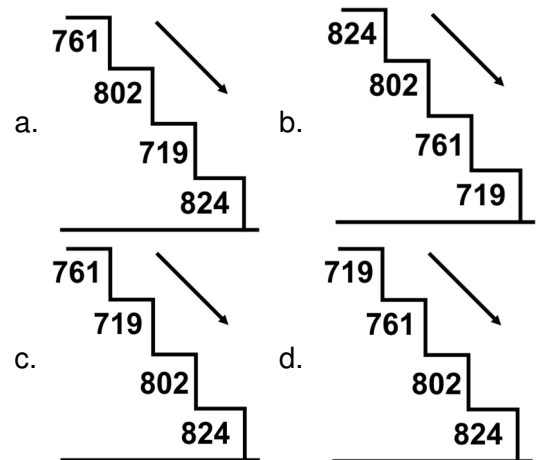
Q: Five hundred sixty-three

R: Three hundred ninety

S: Two hundred eighty-five

- a. $S < P < R < Q$ b. $S < R < Q < P$
c. $R < S < P < Q$ d. $S < R < P < Q$

34. Which of the following correctly represents the descending order of the numbers?



35. Which of the following shows the correct ascending order for P, Q and R?

P: 4 hundreds 16 tens 2 ones

Q: 3 hundreds 25 tens 18 ones

R: 3 hundreds 29 tens 13 ones

- a. $P > Q > R$ b. $Q < P < R$
c. $P < Q < R$ d. $R > P > Q$

36. The scores of 4 children in a video game is shown here in the table. Arrange the children in descending order of their scores in the video game.

Emily	32 tens 12 ones
Jane	41 tens 17 ones
Elizabeth	28 tens 32 ones
Harry	25 tens 42 ones

- a. Jane > Emily > Elizabeth > Harry
b. Jane > Elizabeth > Emily > Harry
c. Jane > Emily > Harry > Elizabeth
d. Emily > Jane > Elizabeth > Harry

37. The table shows the number of stamps owned by 3 children. Which of the following shows the arrangement of their names in ascending order of the number of stamps owned by them?

Diana	Two hundred twenty-seven
Lisa	Two hundred nine
Joan	Three hundred seventeen
Margaret	One hundred ninety-eight

- a. Margaret < Diana < Lisa < Joan
- b. Lisa < Margaret < Diana < Joan
- c. Margaret < Lisa < Joan < Diana
- d. Margaret < Lisa < Diana < Joan

- 38.** The table here shows the number of cupcakes sold by three bakeries in a month. Arrange the bakeries in descending order of their number of cupcakes sold.

Bakery A	One hundred forty-eight
Bakery B	17 tens 12 ones
Bakery C	112

- a. $A > B > C$
- b. $B > A > C$
- c. $C > B > A$
- d. $C > A > B$

- 39.** Mia, Tim, Ryan and Nick had 108, 196, 157 and 134 marbles respectively. Which of the following shows the arrangement of the children in ascending order of the number of marbles they own?

- a. Mia < Nick < Ryan < Tim
- b. Mia < Ryan < Nick < Tim
- c. Mia < Nick < Tim < Ryan
- d. Mia < Tim < Nick < Ryan

- 40.** Here are some numbers P, Q and R. Arrange them in descending order.
P: 12 tens more than 150
Q: 38 ones more than 140
R: 17 tens less than 240

- a. $P > R > Q$
- b. $R > Q > P$
- c. $Q > P > R$
- d. $R > P > Q$

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

- a. $325 > 418$
- b. $195 < 217$
- c. $393 > 405$
- d. $264 < 203$

- 42.** Fill in the blank.

527 < ____

- a. 178
- b. 426
- c. 519
- d. 532

- 43.** Fill in the blank.

Six hundred seventy-two > ____

- a. 657
- b. 683
- c. 691
- d. 702

- 44.** Fill in the blank.

458 ____ 491

- a. >
- b. <
- c. =
- d. ≤

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

- a. Three hundred seventeen > 370
- b. Four hundred eighty < 418
- c. Four hundred thirty-six > 409
- d. Five hundred fifty-four < 542

- 46.** Fill in the blank.

2 hundreds 14 tens 24 ones = ____

- a. 2 hundreds 24 tens 14 ones
- b. 3 hundreds 5 tens 14 ones
- c. 3 hundreds 6 tens 14 ones
- d. 2 hundreds 26 tens 14 ones

- 47.** Which of the following statements is NOT correct?

- a. 28 tens 12 ones < Three hundred
- b. 26 tens 24 ones = 284
- c. 31 tens 17 ones > 317
- d. 29 tens 26 ones < Three hundred

48. Fill in the blank.

Five hundred seventy-two < ____

- a. 48 tens 28 ones
- b. 52 tens 12 ones
- c. 49 tens 37 ones
- d. 54 tens 37 ones

49. Sara, Jane, Maria and Lisa had 178, 132, 146, 184 stickers respectively. Which of the following statements is correct based on the number of stickers they had?

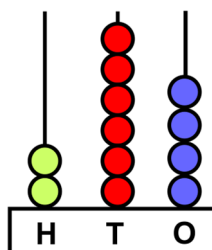
- a. Number of stickers with Sara < Number of stickers with Jane
- b. Number of stickers with Jane > Number of stickers with Maria
- c. Number of stickers with Maria > Number of stickers with Lisa
- d. Number of stickers with Lisa > Number of stickers with Jane

50. The table here shows the number of apples bore by 4 trees. Which of the following statements is NOT correct based on the number of apples bore by the 4 trees?

Tree 1	1 hundred 12 tens 18 ones
Tree 2	1 hundred 14 tens 5 ones
Tree 3	1 hundred 19 tens 11 ones
Tree 4	1 hundred 8 tens 24 ones

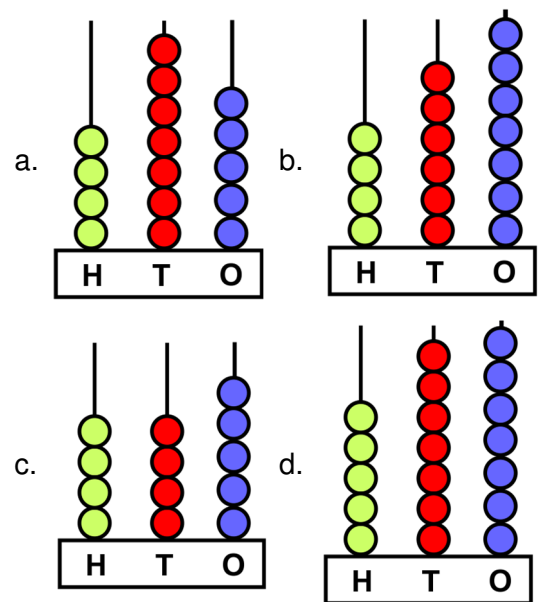
- a. Tree 1 < Tree 2
- b. Tree 2 > Tree 3
- c. Tree 3 > Tree 4
- d. Tree 1 < Tree 3

51. What is the number shown on the abacus?

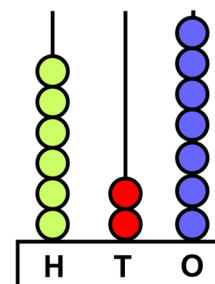


- a. 264
- b. 426
- c. 462
- d. 624

52. Which of the following abacuses represents the number 467?

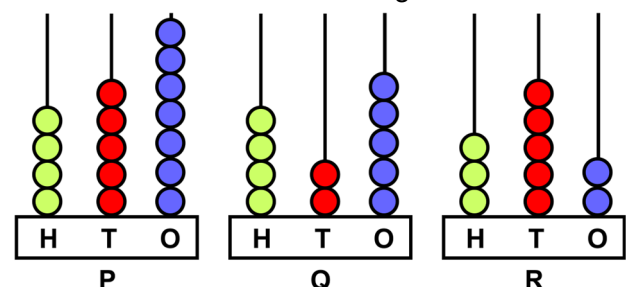


53. Which of the following number names matches with the number shown on the abacus?



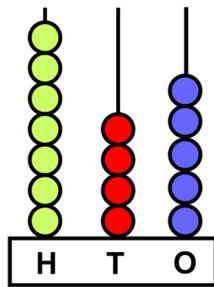
- a. Six hundred twenty-seven
- b. Two hundred sixty-seven
- c. Seven hundred sixty-two
- d. Seven hundred twenty-six

54. Arrange the given numbers shown on the abacuses in descending order.



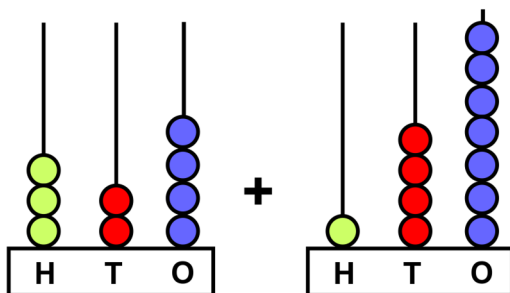
- a. $Q > P > R$
- b. $Q > R > P$
- c. $P > Q > R$
- d. $R > P > Q$

55. What will be the number obtained if the hundreds and ones place beads in the abacus are interchanged?



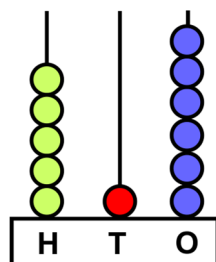
- a. 457 b. 547
c. 745 d. 754

56. What will be the result?



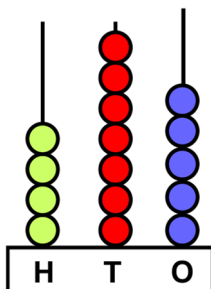
- a. 460 b. 461
c. 471 d. 472

57. What will be obtained when 127 is subtracted from the number shown on the abacus?



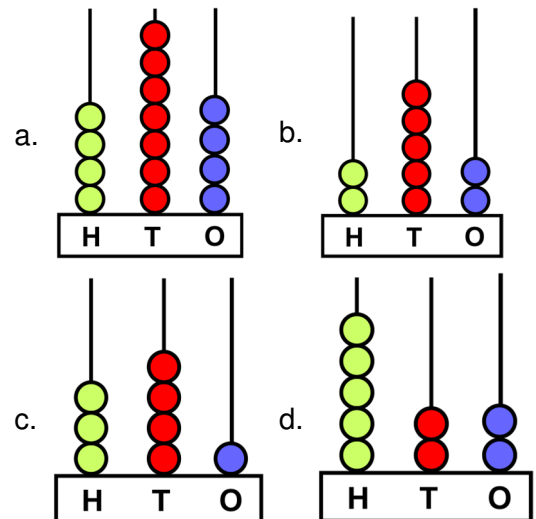
- a. 389 b. 390
c. 399 d. 401

58. What is 135 more than the number shown on the abacus?

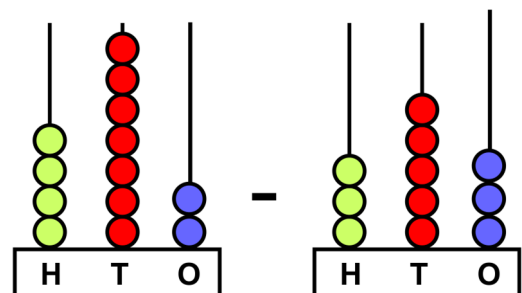


- a. 500 b. 510
c. 600 d. 610

59. Which of the following abacuses represents a three-digit even number where the tens digit is 3 more than the ones digit, and the sum of all its digits is 9?



60. What will be the result?



- a. 118 b. 119
c. 128 d. 129

61. Identify the given series.

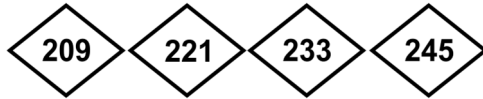


- a. Skip counting 4
b. Skip counting 6
c. Skip counting 7
d. Skip counting 8

62. Which of the following options shows the numbers in skip counting of 8 series?

- a. 175, 182, 189 b. 164, 172, 179
c. 168, 176, 184 d. 172, 178, 186

63. What will be the next number in the series?



- a. b.
c. d.

64. What is the missing number in the series?



- a. b.
c. d.

65. Identify the series.
452, 461, 470, 479

- a. Skip counting of 7
b. Skip counting of 8
c. Skip counting of 9
d. Skip counting of 11

66. Fill in the blank.
157, 170, __, 196

- a. 182 b. 183
c. 184 d. 185

67. What will be the next number in the series?
195, 180, 165, 150

- a. 125 b. 130
c. 135 d. 140

68. Which of the following is skip counting of 14 series?

- a. 84, 98, 112, 126
b. 82, 96, 110, 112
c. 80, 94, 106, 120
d. 83, 97, 113, 125

69. Fill in the blank.
157, __, 139, 130

- a. 147 b. 148
c. 149 d. 150

70. Some numbers are written here in skip counting of 13 series starting from 65. Which number is NOT correct in the series?
65, 78, 91, 104, 119

- a. 78 b. 91
c. 104 d. 119

71. In which of the following numbers, the place value of digit 2 is the greatest?

- a. 112 b. 128
c. 236 d. 432

72. What is the place value of the underlined digit in the number 456?

- a. 5 b. 50
c. 55 d. 500

73. Which digit has the highest place value in the number 248?

- a. 2 b. 4
c. 2 and 4 both d. 8

74. At which place should 6 be placed while forming a number using digits 6, 4 and 7, so that its place value is the highest?

- a. hundreds place b. tens place
c. ones place d. units place

75. What is the sum of the place values of the underlined digits in the numbers 346 and 219?

- a. 13 b. 31
- c. 40 d. 310

76. What is the difference in the place values of the underlined digits in the numbers 728 and 167?

- a. 10 b. 64
- c. 100 d. 640

77. What is the place value of 7 in the number 25 tens 26 ones?

- a. 7 b. 14
- c. 70 d. 700

78. What is the product of the place value of digit 5 in the numbers 105 and 257?

- a. 10 b. 25
- c. 250 d. 2500

79. In which of the following numbers does the digit 3 have the smallest place value?

- a. Three hundred twenty-seven
- b. Four hundred fifty-three
- c. Five hundred thirty-six
- d. Three hundred fifty-eight

80. Which of the following statement is NOT correct?

- a. Place value of 4 in 481 is 400.
- b. Place value of 0 is always 0.
- c. Place value of 5 in 357 is 50.
- d. Place value of a digit is least when it occurs in the hundreds place of a number.

81. What will be the next letter in the given pattern?
A, D, G, ?

- a. I b. J
- c. K d. L

82. Fill in the blank.
I, __, M, O

- a. J b. K
- c. N d. L

83. What will be the next in the given pattern?
Z, W, T, Q, ?

- a. N b. O
- c. P d. M

84. Fill in the blank.
AZ, __, CX, DW

- a. BE b. BY
- c. YB d. BC

85. What will be the next in the pattern?
AB, ZY, CD, XW, EF, ?

- a. UV b. TU
- c. VU d. UT

86. Fill in the blank.
AF, CH, __, GL

- a. DI b. DJ
- c. EJ d. EK

87. What will be the next in the pattern?
A, ABB, ABBCCC

- a. ABBCCCDD
- b. ABBCCCDDD
- c. ABBCCCDDDD
- d. ABBCCCDDDDD

88. Fill in the blank.
AB, ABAA, ABAABB, __,
ABAABBAAABBB.

- a. ABAABBC b. ABAABBCC
- c. ABAABBAA d. ABAABBAAA

89. Fill in the blank.
ZB, YD, __, WH

- a. EX b. XE
- c. XF d. FX

90. Fill in the blank.
2A, 4C, 6E, 8G, __

- a. 9H b. 9I
- c. 10H d. 10I

91. I am the greatest 3-digit even number.
Who am I?

- | | |
|--------|--------|
| a. 990 | b. 996 |
| c. 998 | d. 999 |

92. I am a 3-digit odd number with my tens and hundreds place digits even. Who am I?

- | | |
|--------|--------|
| a. 213 | b. 246 |
| c. 251 | d. 283 |

93. I am more than 200 but less than 300. My tens place digit is 3 more than my ones place digit. Who am I?

- | | |
|--------|--------|
| a. 214 | b. 257 |
| c. 269 | d. 296 |

94. I am a 3-digit even number lying between 400 and 450. The sum of all my digits is 9. Who am I?

- | | |
|--------|--------|
| a. 413 | b. 426 |
| c. 432 | d. 436 |

95. I am a 3-digit number. I am more than 500 but less than 530. I am a multiple of 10. Who am I?

- | | |
|--------|--------|
| a. 510 | b. 518 |
| c. 521 | d. 525 |

96. Identify the 3-digit number based on the given clues.

- I am greater than 350.
- My hundreds place digit is even.
- I am NOT a multiple of 5.

- | | |
|--------|--------|
| a. 294 | b. 495 |
| c. 684 | d. 835 |

97. Identify the 3-digit even number based on the given clues.

- My hundreds place digit is odd.
- My tens place digit is one less than my hundreds place digit.
- I am greater than 6 hundreds.

- | | |
|--------|--------|
| a. 628 | b. 729 |
| c. 764 | d. 874 |

98. Identify the 3-digit number based on the given clues.

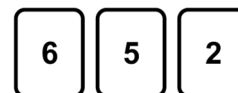
- My hundreds place digit is even.
- My tens place digit is three times the ones place digit.
- I am less than 5 hundreds.

- | | |
|--------|--------|
| a. 231 | b. 362 |
| c. 482 | d. 593 |

99. Which is the smallest 3-digit number that is a multiple of 3?

- | | |
|--------|--------|
| a. 100 | b. 101 |
| c. 102 | d. 103 |

100. Here are three number cards. What is the least even number that can be formed without repeating the digits?



- | | |
|--------|--------|
| a. 256 | b. 265 |
| c. 526 | d. 562 |

CREST International Spell Bee (Summer & Winter)

For Grades 1-8



Exam Highlights

- ✓ Online proctored Spell Bee exam
- ✓ Focus on evaluating spellings, meanings and pronunciation.
- ✓ Exam Pattern: MCQ type questions + Audio Round (Students need to hear the question & write the spelling of the word asked)
- ✓ Get to attempt 2 Free Practice Tests



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