

SOF INTERNATIONAL MATHEMATICS OLYMPIAD

Level 2 | SOLVED PAPERS

5 Years (2013-2014, 2016-2018)

CLASS
3



Copyright © 2018 Science Olympiad Foundation. Printed with the permission of Science Olympiad Foundation. No part of this publication may be reproduced, transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the copyright holder. Ownership of an ebook does not give the possessor the ebook copyright.

All disputes subject to Delhi jurisdiction only.

Disclaimer : The information provided in this book is to give you the path to success but it does not guarantee 100% success as the strategy is completely dependent on its execution and, it is based on previous years' papers of IMO exam.

Published by : MTG Learning Media (P) Ltd.

Corporate Office : Plot 99, 2nd Floor, Sector 44 Institutional Area, Gurgaon, Haryana-122003.

Phone : 0124 - 6601200

Web: mtg.in Email: info@mtg.in

Regd. Office : 406, Taj Apt., Ring Road, Near Safdarjung Hospital, New Delhi-110029

Visit www.mtg.in for buying books online.

Do you want yourself to be updated about

- NEW arrivals at MTG Book store
- Special offers on MTG Books and Magazines
- Exams alerts, instant reply to your queries
- Important questions for forthcoming examinations
- Study tips, quizzes, flowcharts, learning strategies, news from science world, and much more...



Like us on
Facebook

<https://www.facebook.com/pcmbtoday>

Subscribe to our
**YouTube
Channel**



<https://www.youtube.com/MTGBOOKS>

BLOG

Subscribe us on **blog.pcmbtoday.com**

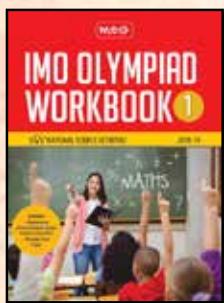
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

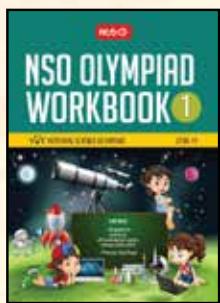
CLASS 1

For latest releases and revised editions

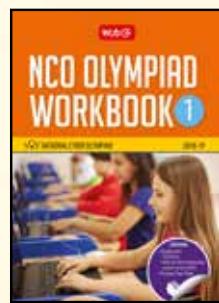
[CLICK HERE](#)



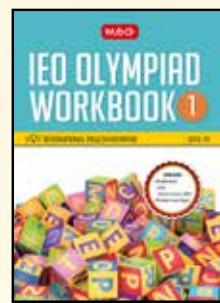
International Mathematics Olympiad



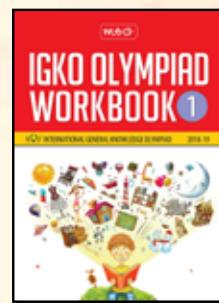
National Science Olympiad



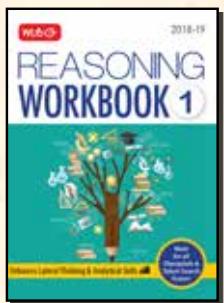
National Cyber Olympiad



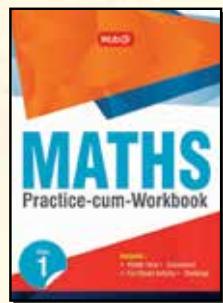
International English Olympiad



International General Knowledge Olympiad



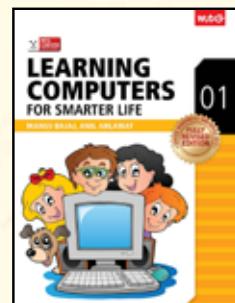
Reasoning



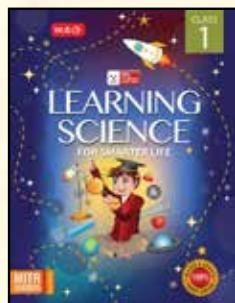
Maths Practice-cum-Workbook



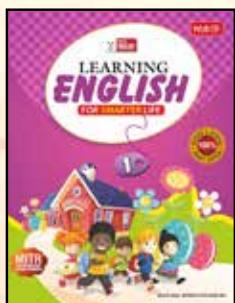
Science Practice-cum-Workbook



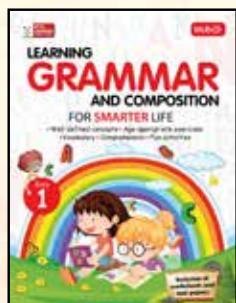
Learning Computers



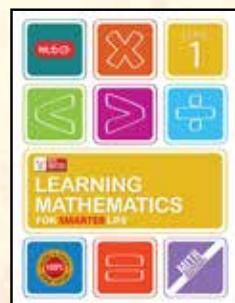
Learning Science



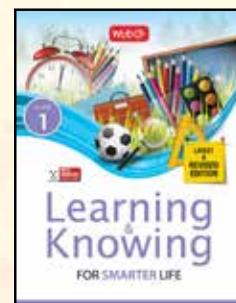
Learning English



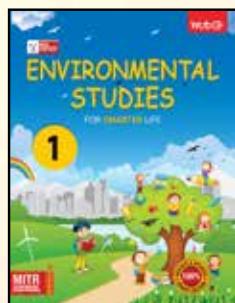
Learning Grammar



Learning Mathematics



Learning & Knowing



EVS

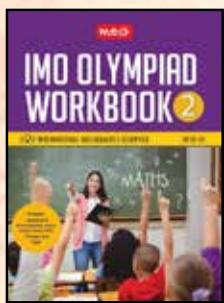
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

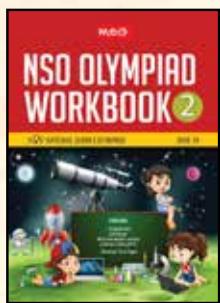
CLASS 2

For latest releases and revised editions

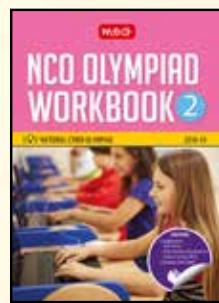
[CLICK HERE](#)



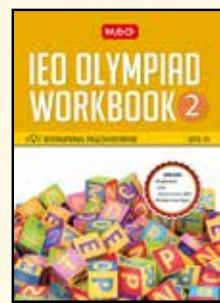
International Mathematics Olympiad



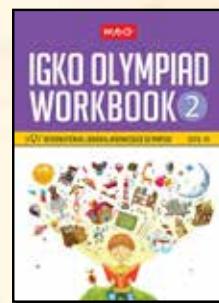
National Science Olympiad



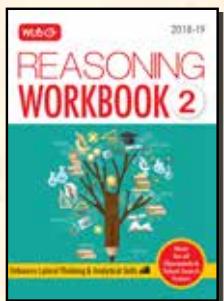
National Cyber Olympiad



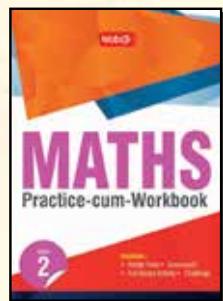
International English Olympiad



International General Knowledge Olympiad



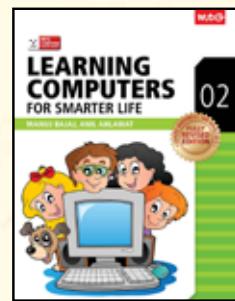
Reasoning



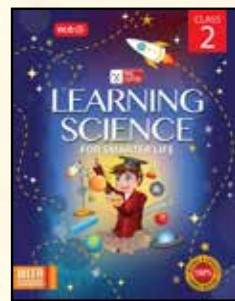
Maths Practice-cum-Workbook



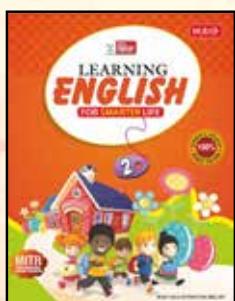
Science Practice-cum-Workbook



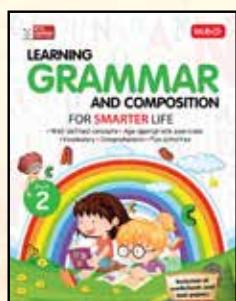
Learning Computers



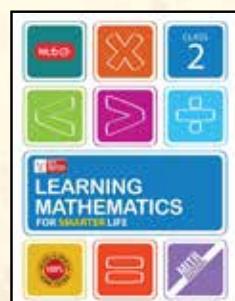
Learning Science



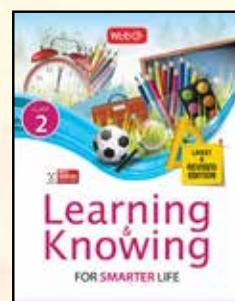
Learning English



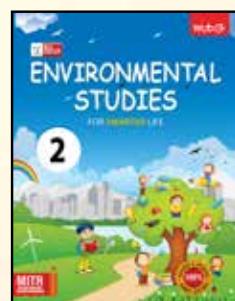
Learning Grammar



Learning Mathematics



Learning & Knowing



EVS

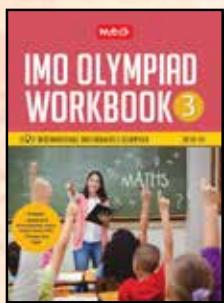
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

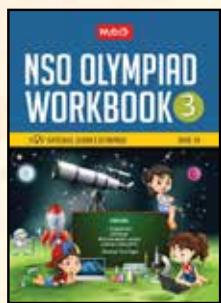
CLASS 3

For latest releases and revised editions

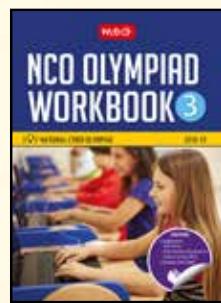
[CLICK HERE](#)



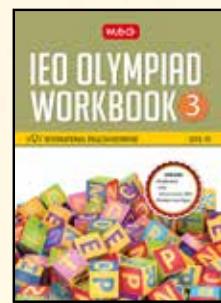
International Mathematics Olympiad



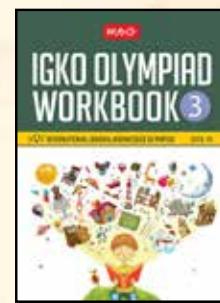
National Science Olympiad



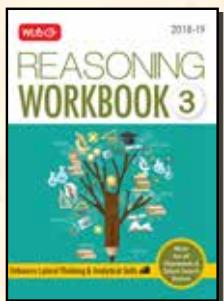
National Cyber Olympiad



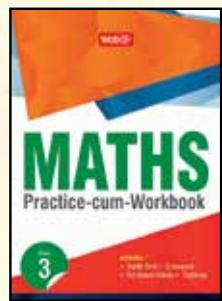
International English Olympiad



International General Knowledge Olympiad



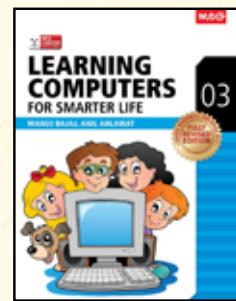
Reasoning



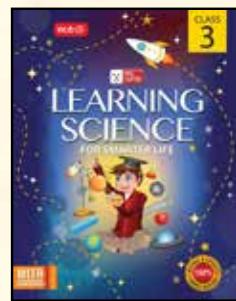
Maths Practice-cum-Workbook



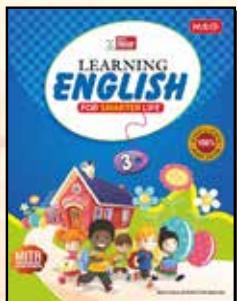
Science Practice-cum-Workbook



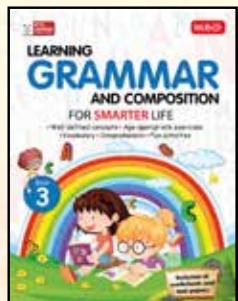
Learning Computers



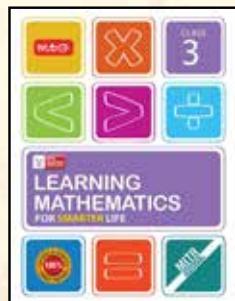
Learning Science



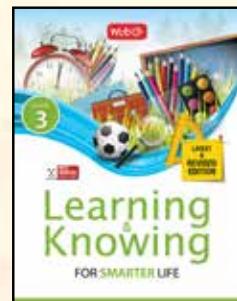
Learning English



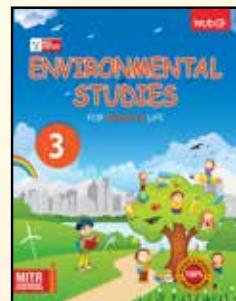
Learning Grammar



Learning Mathematics



Learning & Knowing



EVS

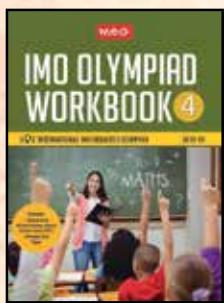
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

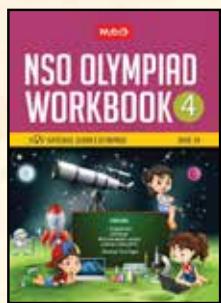
CLASS 4

For latest releases and revised editions

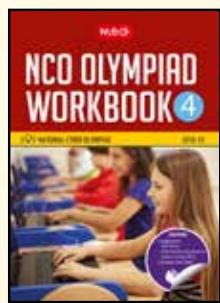
[CLICK HERE](#)



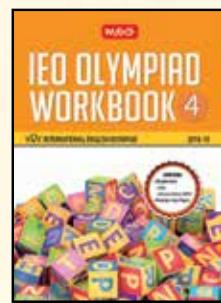
International Mathematics Olympiad



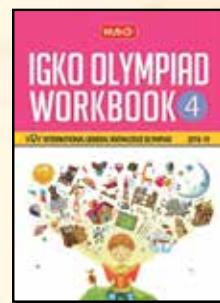
National Science Olympiad



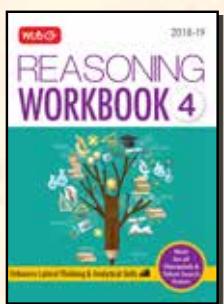
National Cyber Olympiad



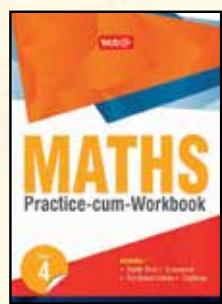
International English Olympiad



International General Knowledge Olympiad



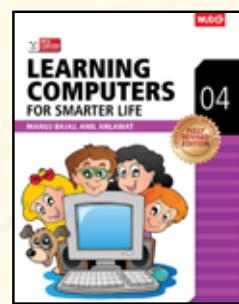
Reasoning



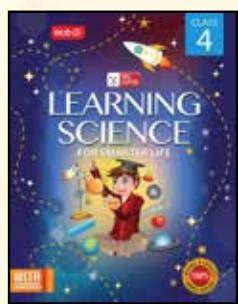
Maths Practice-cum-Workbook



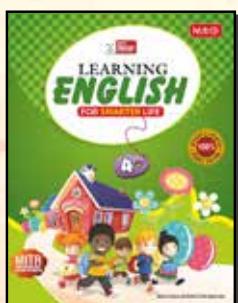
Science Practice-cum-Workbook



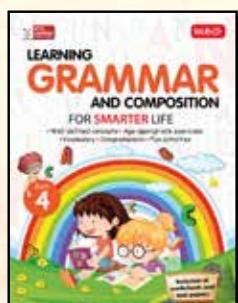
Learning Computers



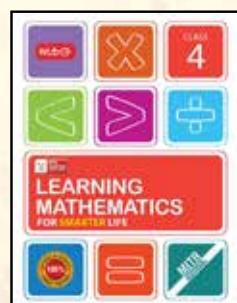
Learning Science



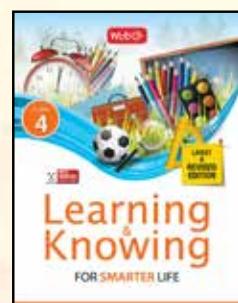
Learning English



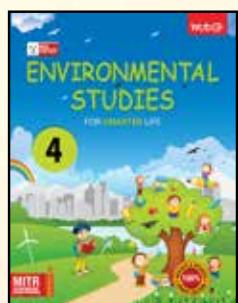
Learning Grammar



Learning Mathematics



Learning & Knowing



EVS

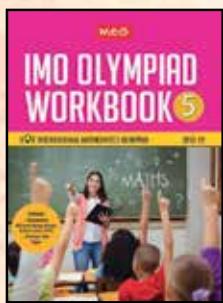
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

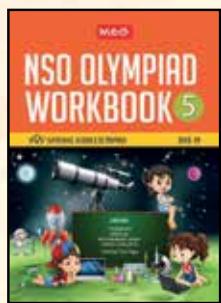
CLASS 5

For latest releases and revised editions

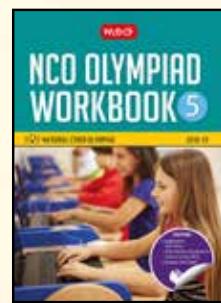
[CLICK HERE](#)



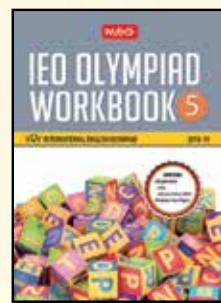
International Mathematics Olympiad



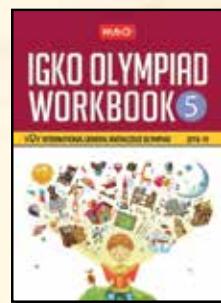
National Science Olympiad



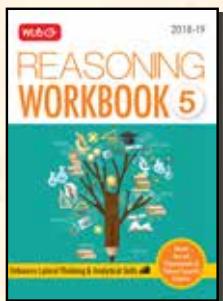
National Cyber Olympiad



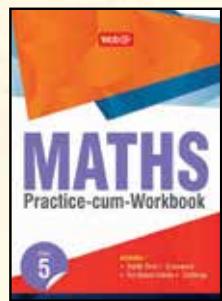
International English Olympiad



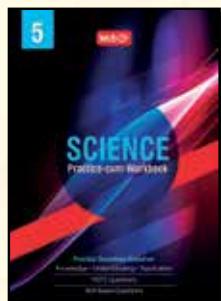
International General Knowledge Olympiad



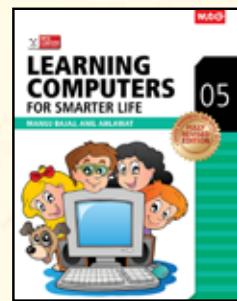
Reasoning



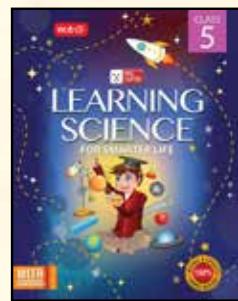
Maths Practice-cum-Workbook



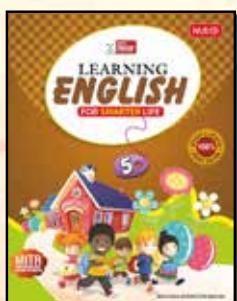
Science Practice-cum-Workbook



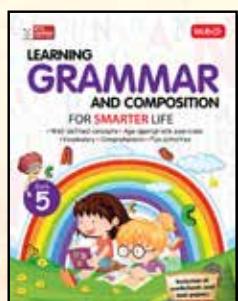
Learning Computers



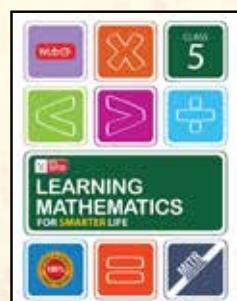
Learning Science



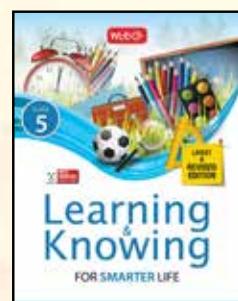
Learning English



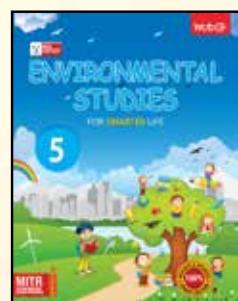
Learning Grammar



Learning Mathematics



Learning & Knowing



EVS

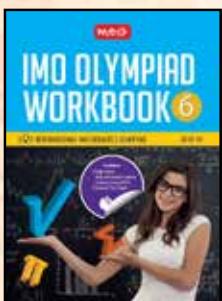
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

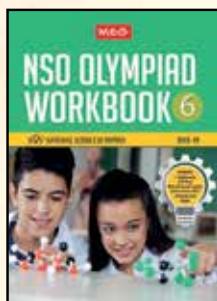
CLASS 6

For latest releases and revised editions

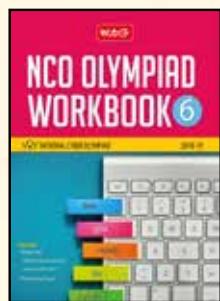
[CLICK HERE](#)



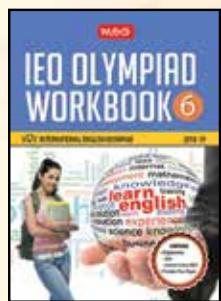
International Mathematics Olympiad



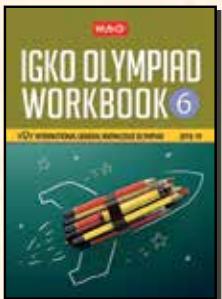
National Science Olympiad



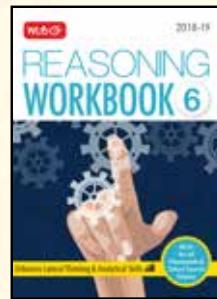
National Cyber Olympiad



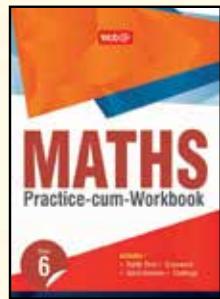
International English Olympiad



International General Knowledge Olympiad



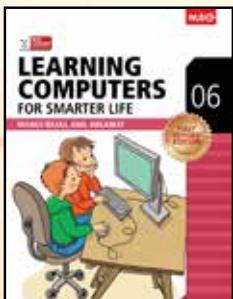
Reasoning



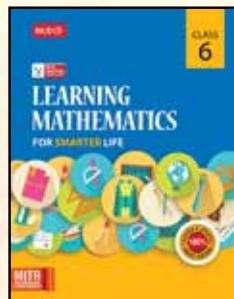
Maths Practice-cum-Workbook



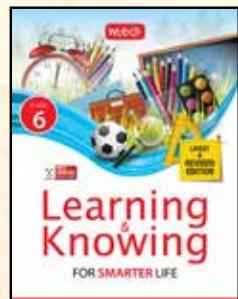
Science Practice-cum-Workbook



Learning Computers



Learning Mathematics



Learning & Knowing



NCERT at your Fingertips

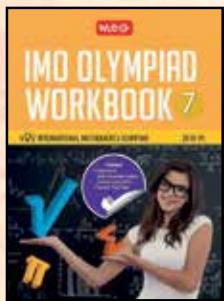
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

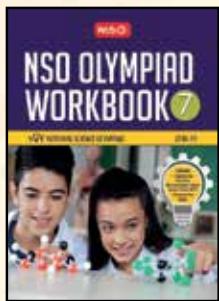
CLASS 7

For latest releases and revised editions

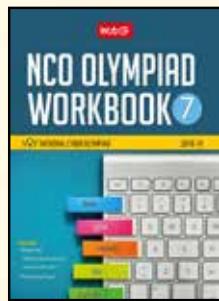
[CLICK HERE](#)



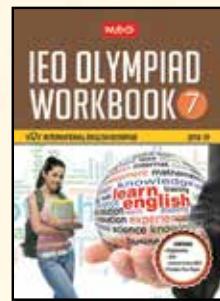
International Mathematics Olympiad



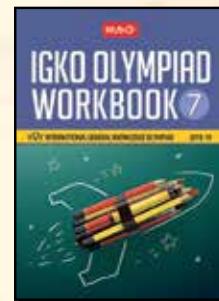
National Science Olympiad



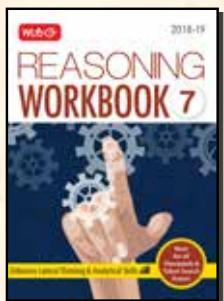
National Cyber Olympiad



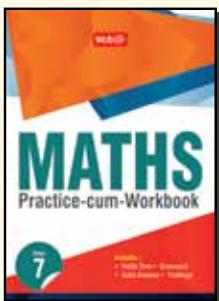
International English Olympiad



International General Knowledge Olympiad



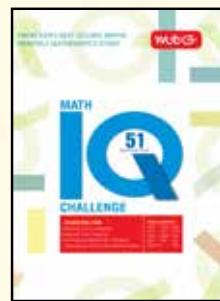
Reasoning



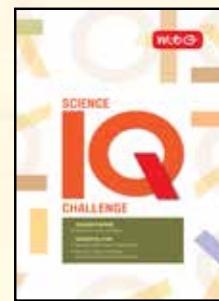
Maths Practice-cum-Workbook



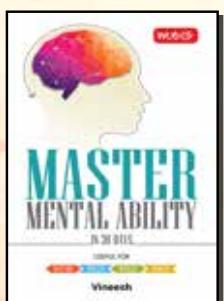
Science Practice-cum-Workbook



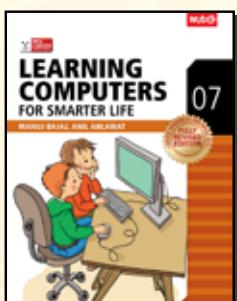
Math IQ Challenge



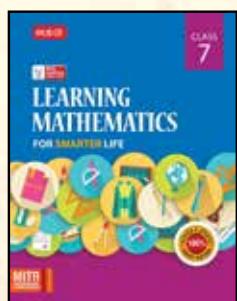
Science IQ Challenge



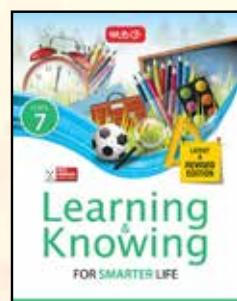
Master Mental Ability in 30 Days



Learning Computers



Learning Mathematics



Learning & Knowing



NCERT at your Fingertips

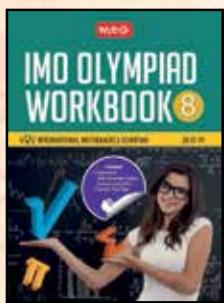
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

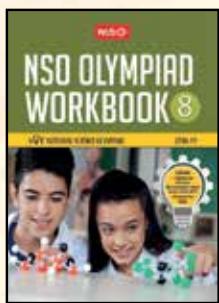
CLASS 8

For latest releases and revised editions

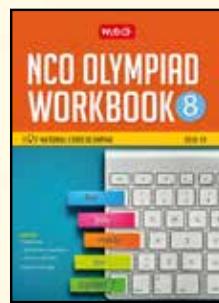
[CLICK HERE](#)



International Mathematics Olympiad



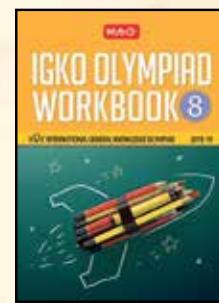
National Science Olympiad



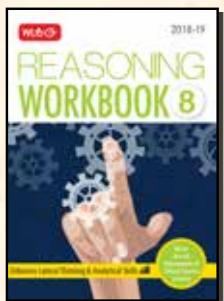
National Cyber Olympiad



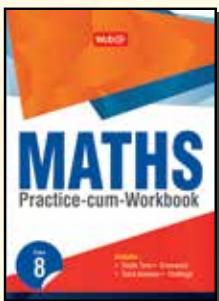
International English Olympiad



International General Knowledge Olympiad



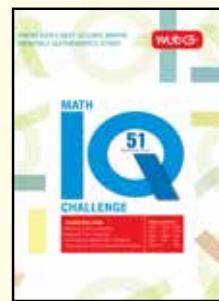
Reasoning



Maths Practice-cum-Workbook



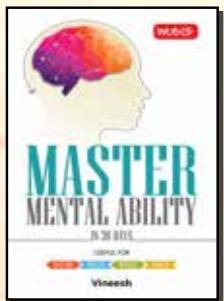
Science Practice-cum-Workbook



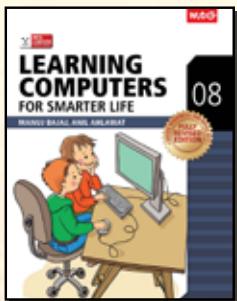
Math IQ Challenge



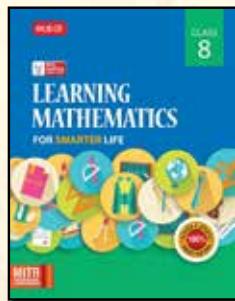
Science IQ Challenge



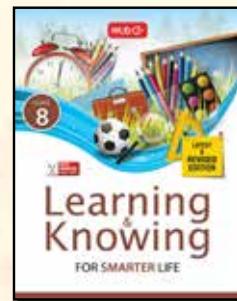
Master Mental Ability in 30 Days



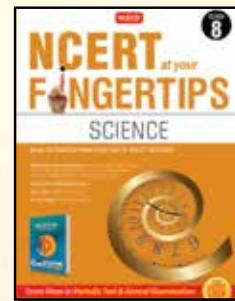
Learning Computers



Learning Mathematics



Learning & Knowing



NCERT at your Fingertips

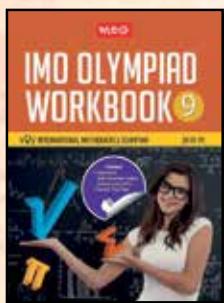
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

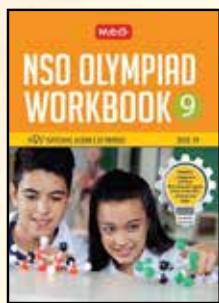
CLASS 9

For latest releases and revised editions

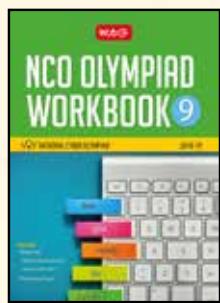
CLICK HERE



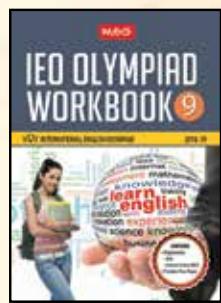
International
Mathematics
Olympiad



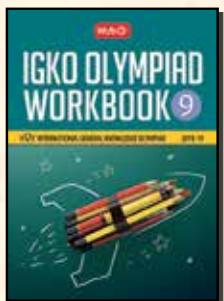
National
Science
Olympiad



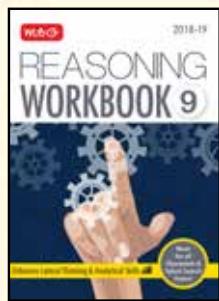
National Cyber
Olympiad



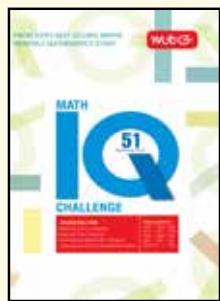
International
English
Olympiad



International
General Knowledge
Olympiad



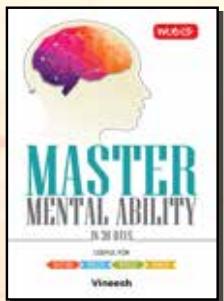
Reasoning



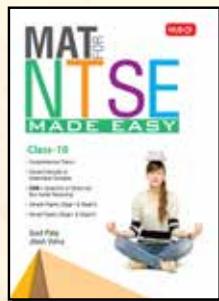
Math IQ
Challenge



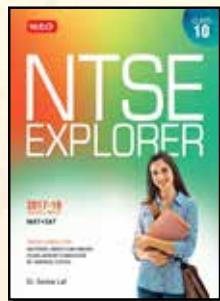
Science IQ
Challenge



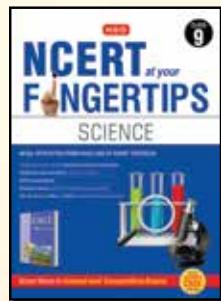
Master Mental
Ability in 30 Days



MAT for NTSE



NTSE Explorer



NCERT at your
Fingertips

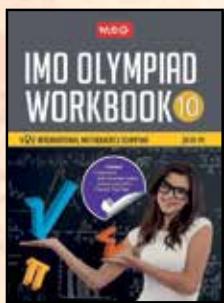
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

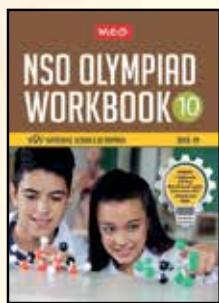
CLASS 10

For latest releases and revised editions

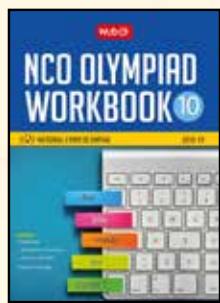
[CLICK HERE](#)



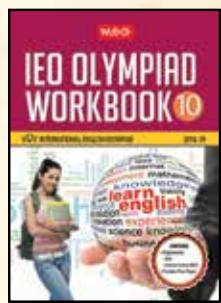
International
Mathematics
Olympiad



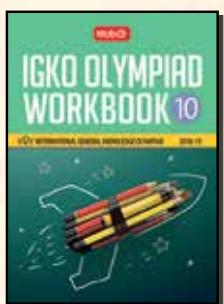
National
Science
Olympiad



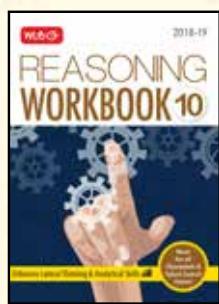
National Cyber
Olympiad



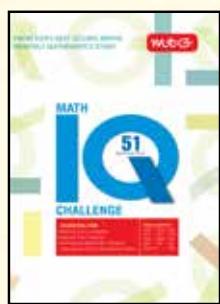
International
English
Olympiad



International
General Knowledge
Olympiad



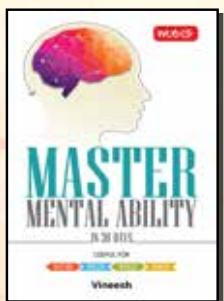
Reasoning



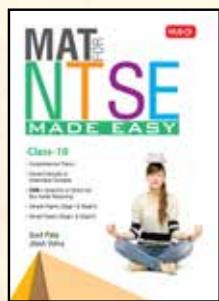
Math IQ
Challenge



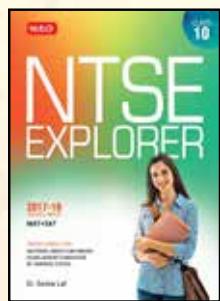
Science IQ
Challenge



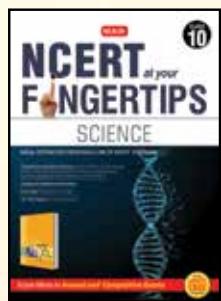
Master Mental
Ability in 30 Days



MAT for NTSE



NTSE Explorer



NCERT at your
Fingertips

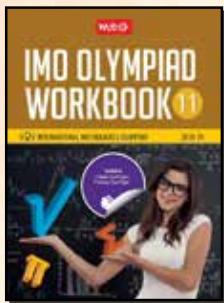
MTG WORKBOOKS / OLYMPIAD BOOKS

Check complete details on www.mtg.in

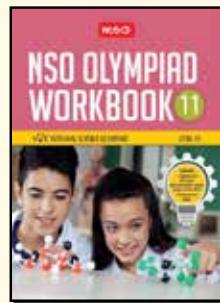
CLASS 11

For latest releases and revised editions

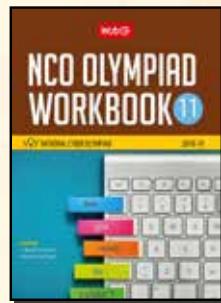
[CLICK HERE](#)



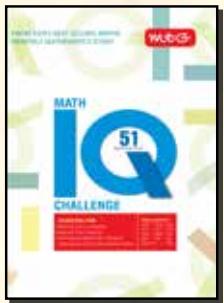
International
Mathematics
Olympiad



National
Science
Olympiad



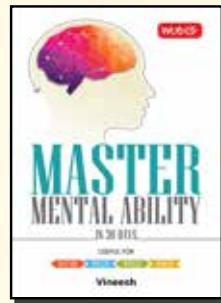
National Cyber
Olympiad



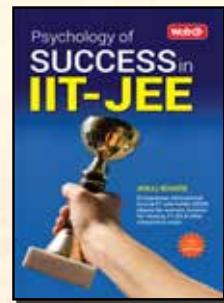
Math IQ
Challenge



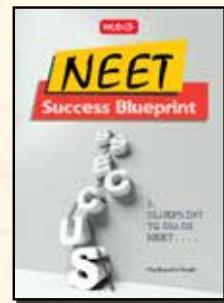
Science IQ
Challenge



Master Mental
Ability in 30 Days



Psychology of
Success



NEET Success
Blueprint

MTG

WORKBOOKS /

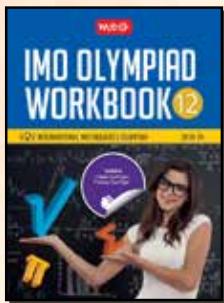
OLYMPIAD BOOKS

Check complete details on www.mtg.in

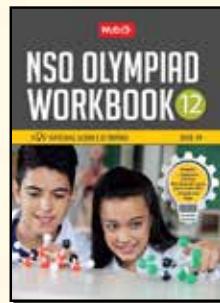
CLASS 12

For latest releases and revised editions

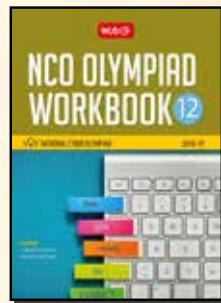
[CLICK HERE](#)



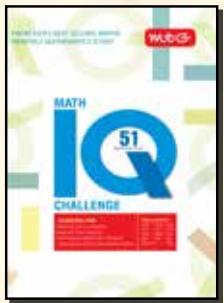
International
Mathematics
Olympiad



National
Science
Olympiad



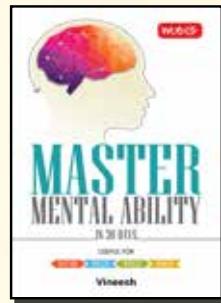
National Cyber
Olympiad



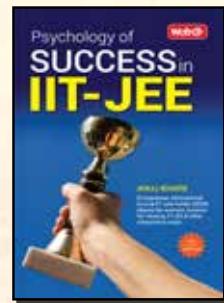
Math IQ
Challenge



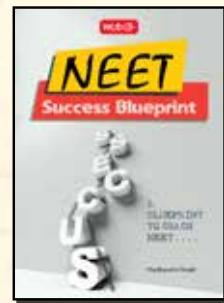
Science IQ
Challenge



Master Mental
Ability in 30 Days



Psychology of
Success



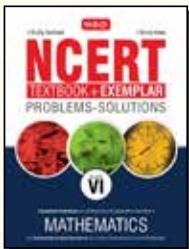
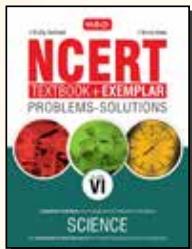
NEET Success
Blueprint

NCERT

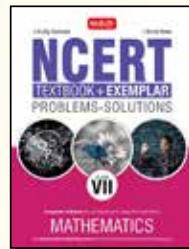
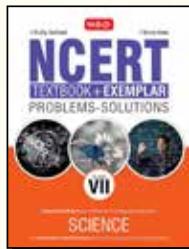
TEXTBOOK+EXEMPLAR PROBLEMS-SOLUTIONS

For Classes 6, 7, 8, 9, 10, 11 & 12

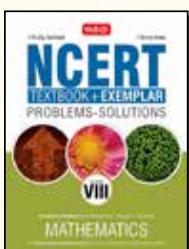
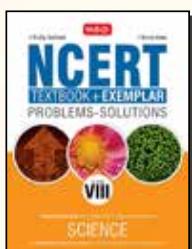
Class 6



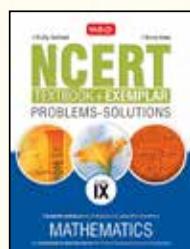
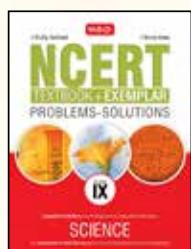
Class 7



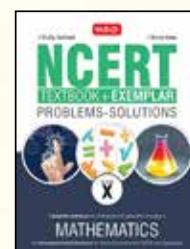
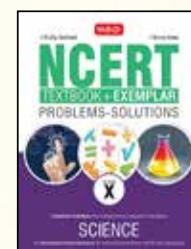
Class 8



Class 9

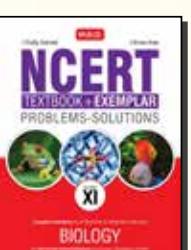
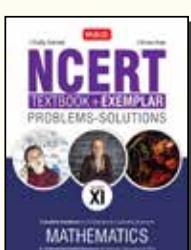
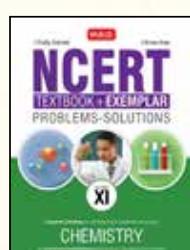
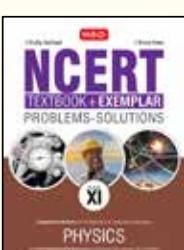


Class 10



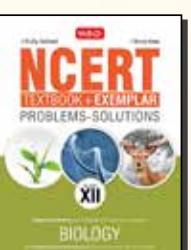
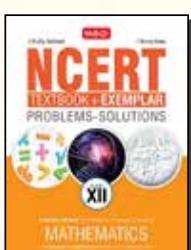
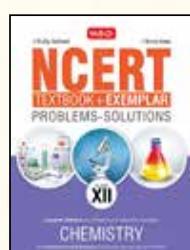
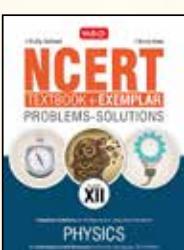
11

Class



12

Class

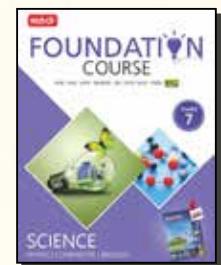
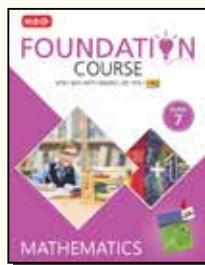
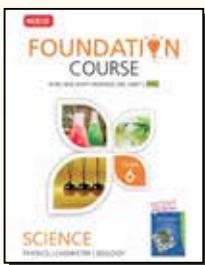
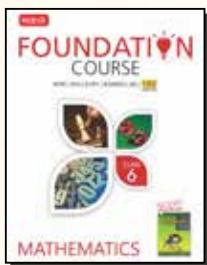


JEE (Main & Advanced) | NEET | BOARDS | OLYMPIAD | NTSE

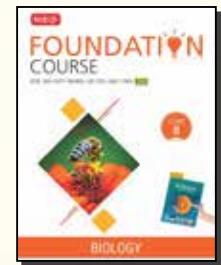
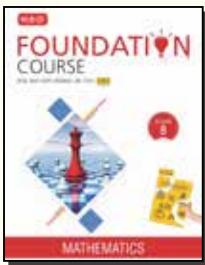
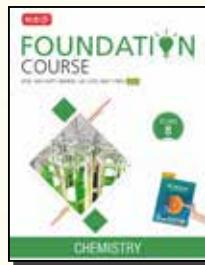
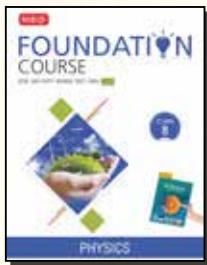
FOUNDATION COURSE

For Classes 6, 7, 8, 9 & 10

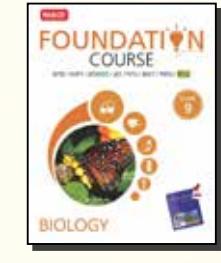
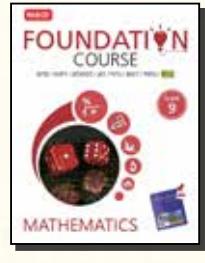
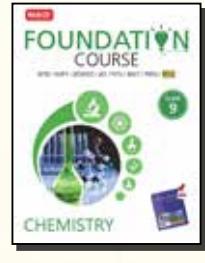
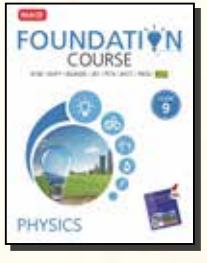
Class 6



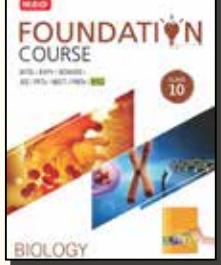
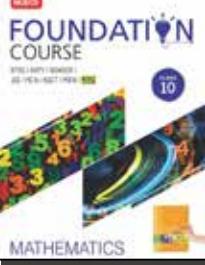
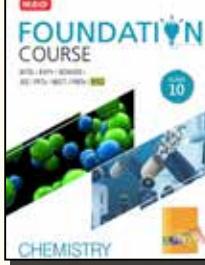
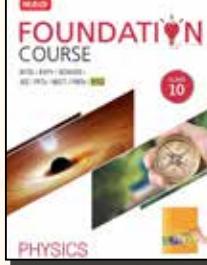
Class 8



Class 9



Class 10



CBSE CHAMPION

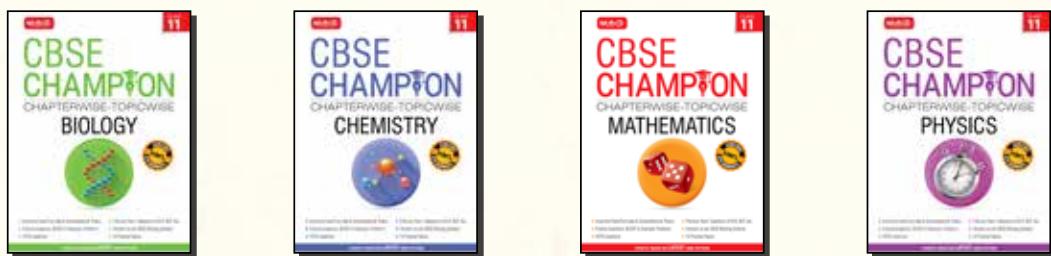
CHAPTERWISE-TOPICWISE

For Classes 10, 11 and 12

Class 12



Class 11



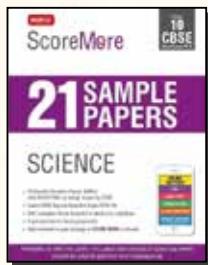
Class 10



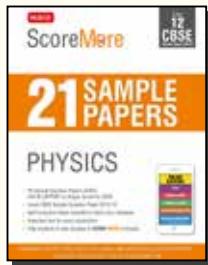
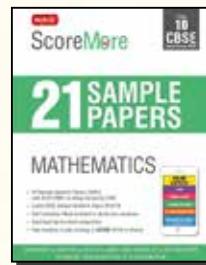
ScoreMore

21 SAMPLE PAPERS

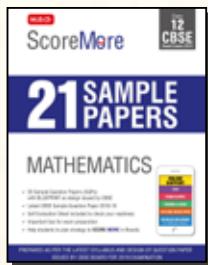
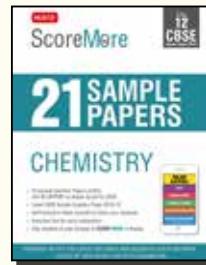
For Classes 10 & 12



Class 10



Class 12



IMPORTANT INSTRUCTIONS

Exam Date : 10th February 2019.

Center of exam : As assigned by SOF on your admit card. Kindly coordinate with your school coordinator for exact information about exam. Write to info@sofworld.org for any enquiry.

Mode of exam : IEO/NSO/IMO level 2 for academic year 2018-19 will be a paper-pen objective test.

Pattern of the exams :

INTERNATIONAL ENGLISH OLYMPIAD

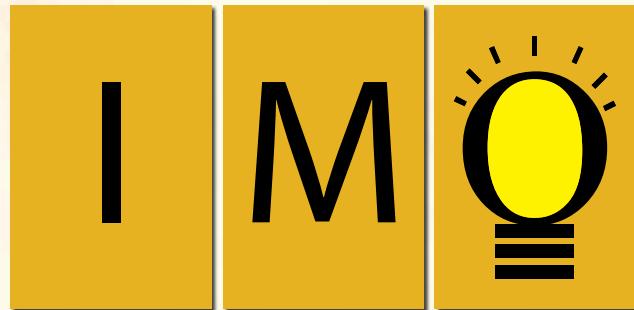
Class	Section	No. of Questions	Marks per Question	Total Marks
3 to 4	Word and Structure Knowledge, Reading	30	1	30
	Achievers Section	5	2	10
	Grand Total	35		40
5 to 12	Word and Structure Knowledge, Reading	45	1	45
	Achievers Section	5	3	15
	Grand Total	50		60

NATIONAL SCIENCE OLYMPIAD

Class	Section	No. of Questions	Marks per Question	Total Marks
3 to 4	Science	30	1	30
	Achievers Section	5	2	10
	Grand Total	35		40
5 to 10	Science	45	1	45
	Achievers Section	5	3	15
	Grand Total	50		60
11 and 12	Physics & Chemistry	25	1	25
	Achievers Section	5	3	15
	Mathematics/Biology	20	1	20
	Grand Total	50		60

INTERNATIONAL MATHEMATICS OLYMPIAD

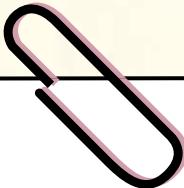
Class	Section	No. of Questions	Marks per Question	Total Marks
3 to 4	Mathematics	30	1	30
	Achievers Section	5	2	10
	Grand Total	35		40
5 to 12	Mathematics	45	1	45
	Achievers Section	5	3	15
	Grand Total	50		60



CLASS 3

Contents

- ➲ IMO - Level-2 (2013)
- ➲ IMO - Level-2 (2014)
- ➲ IMO - Level-2 was an online exam. (2015)
- ➲ IMO - Level-2 (2016)
- ➲ IMO - Level-2 (2017)
- ➲ IMO - Level-2 (2018)



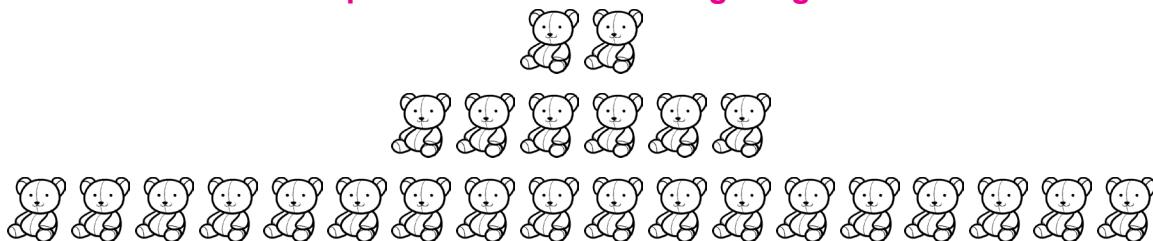


LEVEL - 2

Year 2012-13

SECTION-I : LOGICAL REASONING

1. What is the rule for the pattern in the following diagram?

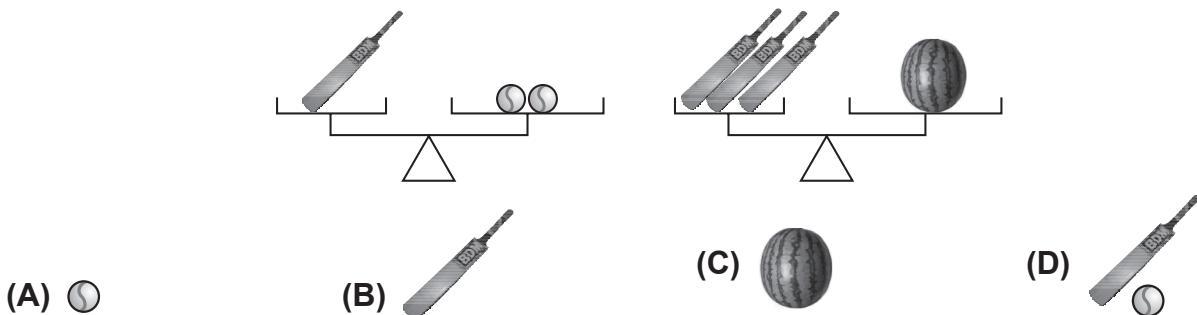


- (A) Multiply the number of toys by 3
- (B) Increase the number of toys by 2
- (C) Increase the number of toys by 3
- (D) Increase the number of toys by 2 and then by 3

2. Harsha is standing 7th from left end in a row of 15 students. Her position from right end is ____.

- (A) 9th
- (B) 8th
- (C) 7th
- (D) 6th

3. Which of the following objects is the heaviest ?

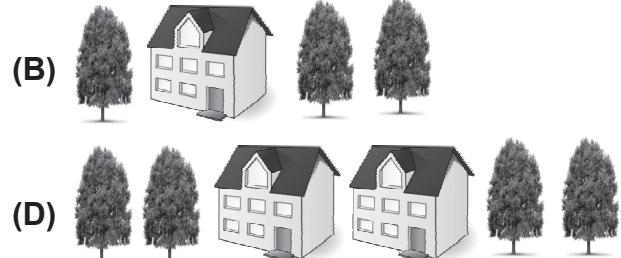


4. Sandeep has a presentation on the 10th day from today. If today is Monday, then what is the day for the presentation ?

- (A) Thursday
- (B) Wednesday
- (C) Sunday
- (D) Friday

SPACE FOR ROUGH WORK

5.  shows group of 5 trees, and  shows group of 5 houses. Which of the following figures shows 10 houses surrounded by 20 trees ?



6. Mona has forgotten her password. She only remembers that the password has 4 characters. The characters are not made of straight lines. Which of the following can be her password ?

(A) ABDC (B) SCOT (C) SCO@ (D) MPNO

7. Which three parts will complete the figure (X) ?

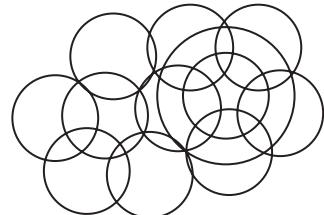


Figure (X)



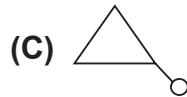
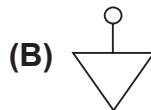
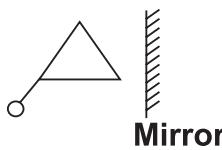
8. How many circles are there in the given figure ?

(A) 12
(B) 13
(C) 9
(D) 10



SPACE FOR ROUGH WORK

9. Which is the mirror image of the given figure?



10. If is coded as 9, is coded as 16 and is coded as 25, then how is coded?

(A) 72

(B) 54

(C) 64

(D) 36

SECTION-II : MATHEMATICAL REASONING

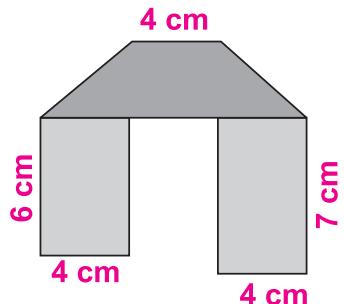
11. A rectangular piece of paper was folded to form the shape shown here. What is the total length of the piece of paper before it was folded?

(A) 68 cm

(B) 64 cm

(C) 58 cm

(D) 50 cm



12. I am a 2-digit number. If 28 is added to me, I become a 3-digit number. If 63 is subtracted from me, I become a 1-digit number. Which number am I?

(A) 72

(B) 56

(C) 98

(D) 69

13. Isha can make a paper plane in 2 minutes. She started making paper planes at 4:30 p.m. and took a break of 25 minutes at 6:00 p.m. If she finished making planes at 8:15 p.m., then the number of planes made are _____.

(A) 100

(B) 120

(C) 150

(D) 200

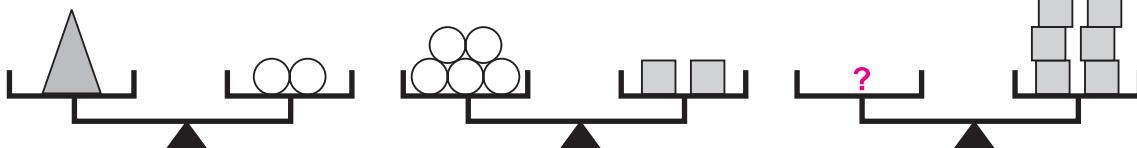
SPACE FOR ROUGH WORK

14. What day will it be 88th day from 4th June 20XX?

- (A) Friday
- (B) Thursday
- (C) Tuesday
- (D) Wednesday

JUNE 20XX						
Mon	Tue	Wed	Thu	Fri	Sat	Sun
			1	2	3	4
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30			

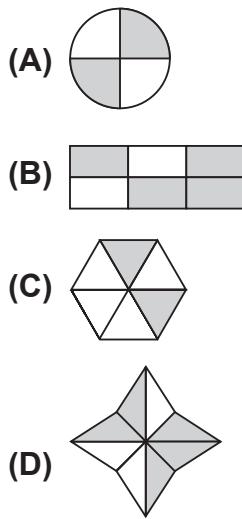
15. How many  are needed to balance 8  ?



- (A) 20
- (B) 30
- (C) 40
- (D) 10

16. Select the correct match of unshaded fraction.

Figure



Fraction

$$\frac{7}{12}$$

$$1$$

$$\frac{5}{8}$$

$$\frac{3}{8}$$

SPACE FOR ROUGH WORK

17. The sum of P, Q and R is ____.

- (A) 36
- (B) 24
- (C) 22
- (D) 25

$$\begin{array}{r}
 12\boxed{P} \\
 - 7895 \\
 \hline
 (-)7 \\
 19 \\
 \hline
 (-)14 \\
 55 \\
 \hline
 (-)4\boxed{Q} \\
 \hline
 \boxed{R}
 \end{array}$$

18. What are the missing numbers in the boxes?

$$738 \div 6 = \boxed{\quad} \div \boxed{\quad}$$

- (A) 123, 1
- (B) 122, 4
- (C) 122, 5
- (D) 102, 1

19. If $\bigcirc \times \bigcirc = 36$ and $\bigcirc + \bigcirc + \bigcirc + \diamond = 42$, then $\diamond + \bigcirc =$ ____.

- (A) 30
- (B) 6
- (C) 18
- (D) 4

20. Garima travelled from Town S to Town Q and came back to Town S, and Latika travelled from Town R to Town P. Who travelled a longer distance and how much longer?

- (A) Latika, 155 km
- (B) Garima, 145 km
- (C) Garima, 155 km
- (D) Latika, 145 km

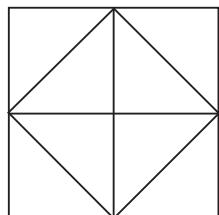


21. If represent 28, then 56 represents how many ?

- (A)
- (B)
- (C)
- (D)

22. There are _____ squares in the given figure.

- (A) 4
- (B) 6
- (C) 8
- (D) 5



SPACE FOR ROUGH WORK

23. Find the value of $(P + Q) \times (R - S)$.

- (A) 6
- (B) 5
- (C) 7
- (D) 3

$$\begin{array}{r}
 & 4 & 6 & 8 & 9 \\
 + & P & Q & R & S \\
 \hline
 & 8 & 1 & 6 & 5
 \end{array}$$

24. The shaded fraction of Figure (X) is _____.

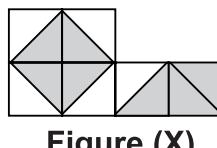


Figure (X)

- (A) $\frac{5}{12}$
- (B) $\frac{6}{12}$
- (C) $\frac{8}{12}$
- (D) $\frac{7}{12}$

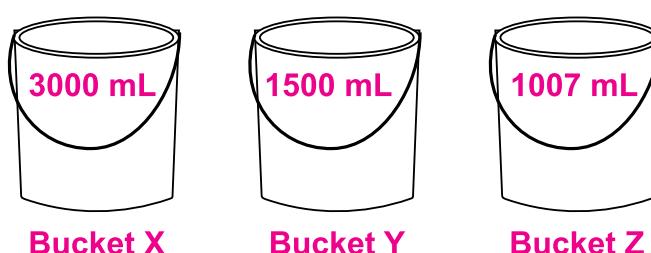
25. The capacity of Tank P is 129 litres. The capacity of Tank Q is twice the capacity of Tank P. What is the total capacity of the two tanks?

- (A) 387000 L
- (B) 129000 mL
- (C) 387000 mL
- (D) 129000 L

SECTION-III : EVERYDAY MATHEMATICS

26. A bookstore is open from 9:15 a.m. to 9:30 p.m. daily. How long is it open each day?

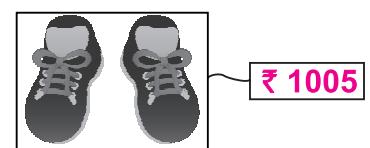
- (A) 10 hrs 45 minutes
- (B) 12 hrs 15 minutes
- (C) 9 hrs 15 minutes
- (D) 11 hrs 25 minutes

27. Priya pours out some water from buckets X, Y and Z. She has 2942 mL of water left in the 3 buckets altogether. The quantity of water Priya poured out is _____.


- (A) 2565 L
- (B) 25 L 65 mL
- (C) 2665 L
- (D) 2 L 565 mL

28. Beena had ₹ 180. Her father gave her ₹ 500 more. How much more should Beena save to buy the pair of shoes?

- (A) ₹ 525
- (B) ₹ 125
- (C) ₹ 325
- (D) ₹ 425



SPACE FOR ROUGH WORK

29. There are 17 cartons, each containing 172 apples. Five cartons contain all the good apples. The remaining cartons are half-filled with good apples. How many bad apples are there in all?
- (A) 1320 (B) 1203 (C) 1302 (D) 1032
-
30. Six years ago, Namita was 4 times as old as Maya. If Maya is 18 years old now, then the total of their present ages is ____.
- (A) 92 years (B) 70 years (C) 82 years (D) 72 years
-
31. There were 1826 boys in the Maths class. There were twice the number of boys in the music class. How many boys signed up for the music class?
- (A) 3625 (B) 3562 (C) 3652 (D) 913
-
32. The weight of a chair is 18 kg. It is 3 kg lighter than a table, and sofa is twice as heavy as the table. Find the weight of the sofa.
- (A) 31 kg (B) 54 kg (C) 58 kg (D) 42 kg
-
33. Lakshita bought a burger and a cake. She gave the cashier ₹ 100 note and received ₹ 7 change. If the burger costs ₹ 45, what was the cost of the cake?
- (A) ₹ 45 (B) ₹ 65 (C) ₹ 48 (D) ₹ 54
-
34. Ria had 366 buttons and she put 12 buttons into each packet. How many packets were there and how many buttons are left to be put in any packet?
- (A) 36, 6 (B) 30, 6 (C) 6, 36 (D) 30, 5
-
35. Sanchi has twice as many marbles as Sia. Jiya has thrice as many marbles as Sanchi. They have 81 marbles altogether. How many marbles does Jiya have?
- (A) 9 (B) 18 (C) 27 (D) 54
-

SPACE FOR ROUGH WORK

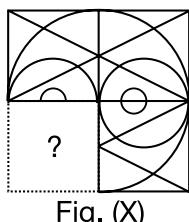
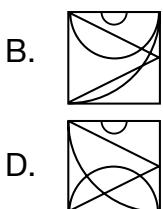
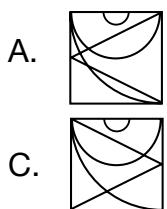


LEVEL - 2

Year 2013-14

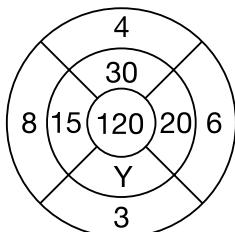
LOGICAL REASONING

1. Which of the following options will complete the pattern in fig. (X)?

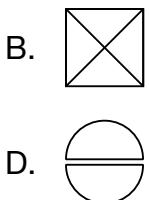
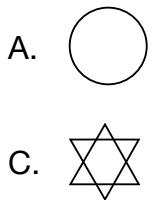


2. Study the given figure carefully and find the value of Y.

- A. 20
B. 98
C. 48
D. 40



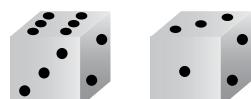
3. Which of the following is needed to complete the pattern?



		2
	?	8
		1

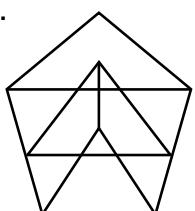
4. Two positions of a dice are shown below. Find the number of dots on the face of the dice that is opposite to the face with 1 dot.

- A. 3
B. 2
C. 5
D. 6



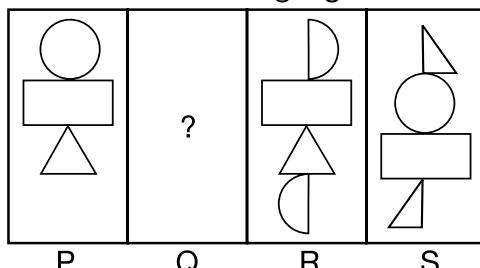
5. There are _____ more straight lines than triangles in the adjoining figure.

- A. 3
B. 1
C. 4
D. 5



Space for Rough Work

6. There is a certain relationship between figures P and R. Establish the same relationship between figures Q and S to find the missing figure from the options.



- A.
- B.
- C.
- D.

7. Read the clues and form a meaningful word using the English alphabets.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

Clues :-

First letter is between H and J.

Second letter is thirteenth from right end.

Third letter is fourth from left end.

Fourth letter is same as first letter.

Fifth letter is first from left end.

Sixth letter is same as second letter.

- A. SQUARE B. HIGHLY C. INDIAN D. FRANCE

8. If 'B' is called 'Z'; 'Z' is called 'M' and 'M' is called 'L', which letter is formed from three straight lines?

- A. B
B. Z
C. M
D. L

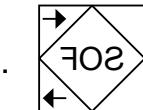
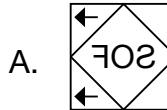
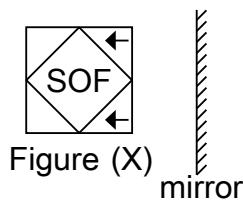
9. Which one word CANNOT be made from the letters of the given word ?

CONCENTRATE

- A. CENTRE
B. CONCERN
C. REASON
D. TREAT

Space for Rough Work

10. Select the correct mirror image of figure (X).



MATHEMATICAL REASONING

11. How many thousands are there in $58732 + 732$?

- A. 98 B. 50000 C. 9 D. 9000

12. Find the value of $P + Q - R + S$.

- A. 13
B. 15
C. 12
D. 16

$\begin{array}{r} 3 \boxed{P} 4 6 \\ \times 9 \\ \hline 3 4 6 1 \boxed{Q} \end{array}$	$\begin{array}{r} \boxed{R} 4 8 7 \\ \times 8 \\ \hline 4 3 8 \boxed{S} 6 \end{array}$
--	--

13. How many tens needs to be subtracted from 5930 to get 230?

- A. 570 B. 900 C. 5970 D. 179

14. 89 is _____ more than the product of 9 and 8.

- A. 72 B. 38 C. 17 D. 30

15. If + + stands for 6, + + stands for 10, + stands for

stands for 50, then $2 \times \text{Flower} + 3 \times \text{Cube} + \text{Star} + 3 \times \text{Heart}$ stands for _____.

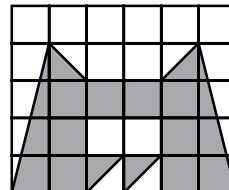
- A. 170 B. 172 C. 180 D. 232

Space for Rough Work

16. What fraction of the figure is unshaded ?

- A. $\frac{15}{30}$
C. $\frac{17}{30}$

- B. $\frac{14}{30}$
D. $\frac{16}{30}$



17. Find the difference between the largest possible even number and smallest possible odd number from given digits.

6, 5, 8, 9, 3

- A. 62964 B. 62874 C. 62847 D. 62946

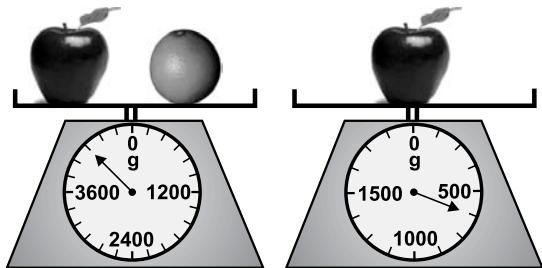
18. Which is the largest number ?

- A. (19×13) hundreds
C. $148 + (137 \text{ tens})$
- B. 20 tens + 928 tens
D. $(680 - 241)$ hundreds

19. Using the given balances, find the weight of



- A. 8400 g
B. 5200 g
C. 7950 g
D. 7800 g



20. Put the correct signs in the circles below in the same order so that the given statement becomes true.

98 ○ 35 ○ 17 ○ 80

- A. +, -, <
B. -, +, >
C. +, +, =
D. -, +, =

EVERYDAY MATHEMATICS

21. Tina bought some pencils. Each pencil costs ₹ 7. If she had ₹ 672, then how many pencils did she buy from this money?

- A. 93 B. 86 C. 72 D. 96

Space for Rough Work

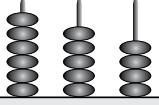
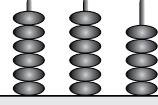
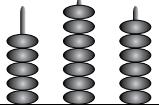
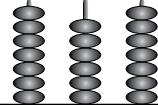
22. Rohit wants to buy a ball which costs ₹ 120. He checks his pocket and find that he has three 50 rupees note. Which of the following statements is true?
- A. Rohit can buy the ball and is left with 20 rupees.
 B. Rohit cannot buy the ball because he will fall short of 20 rupees.
 C. Rohit can buy the ball and is left with 30 rupees.
 D. Rohit can buy the ball and is left with no money.
-
23. Aahana drinks 16 glasses of water in 1 day. If she drinks the same amount of water everyday, how much water will she drink in 1 week?
- A. 102 glasses B. 92 glasses C. 112 glasses D. 132 glasses
-
24. Sonia travelled the distance of 1028 km by three modes of transport. She travelled 1/2 distance by car, 1/2 of left distance by bus and rest by walking. Find the distance travelled by walking.
- A. 513 km B. 257 km C. 342 km D. 420 km
-
25. Mini has 9 boxes of balls. She has 24 balls in 5 boxes and two times of 24 balls each in rest of the boxes. Find the total number of balls she has?
- A. 192 B. 312 C. 120 D. 216
-
26. Mrs. Garg goes to the dance show with her two kids, one friend and friend's two kids. Find the total cost of tickets she has to pay?
- A. ₹ 1000
 B. ₹ 1200
 C. ₹ 1500
 D. ₹ 1050
- | Cost of tickets | |
|-----------------|--------------------|
| Adult | ₹ 250/- per person |
| Child | ₹ 125/- per person |
-
27. Rohan put 420 cupcakes into baking trays. If he uses 35 trays, then how many cupcakes will he put exactly in each tray?
- A. 14 B. 12 C. 17 D. 15
-
28. There are 8 boxes of sweets. Each box has 26 sweets. Each sweet costs ₹ 5. Then the cost of all sweets in 8 boxes is _____.
- A. ₹ 940 B. ₹ 960 C. ₹ 1040 D. ₹ 1060

Space for Rough Work

29. Latika is 15 cm taller than Beena. Priya is 5 cm shorter than Garima. Beena and Priya are of same height. If Garima is 158 cm tall, then height of Latika is ____.
- A. 158 cm B. 168 cm C. 160 cm D. 153 cm
-
30. Chirag sold 125 pizzas and 90 chocolates. If Yogesh sold 20 less pizzas and 10 less chocolates than Chirag, then how many pizzas and chocolates they sold altogether?
- A. 130 pizzas and 190 chocolates B. 230 pizzas and 170 chocolates
C. 250 pizzas and 170 chocolates D. 225 pizzas and 170 chocolates

ACHIEVERS SECTION

31. Which of the following is the INCORRECT match?

- | | | | | | | | |
|--|--|---|---|--|---|---|---|
|  |  | | | | | | |
| A. <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>H</td><td>T</td><td>O</td></tr></table> = 1000 – 346 | H | T | O | B. <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>H</td><td>T</td><td>O</td></tr></table> = 1000 – 335 | H | T | O |
| H | T | O | | | | | |
| H | T | O | | | | | |
|
 | | | | | | | |
|  |  | | | | | | |
| C. <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>H</td><td>T</td><td>O</td></tr></table> = 1000 – 424 | H | T | O | D. <table border="1" style="display: inline-table; vertical-align: middle;"><tr><td>H</td><td>T</td><td>O</td></tr></table> = 1000 – 343 | H | T | O |
| H | T | O | | | | | |
| H | T | O | | | | | |

32. Study the statements carefully and select the correct option.

Statement 1 : Place value of 6 in addition of 4029 and 588 is 6.

Statement 2 : Product of $9 \times 8 \times 7 \times 6 \times 5 \times 4 \times 3 \times 9 \times 8 \times 7 \times 6 \times 5 \times 0 \times 4 \times 3 \times 2$ is 1378.

- A. Both statement 1 and statement 2 are true.
B. Both statement 1 and statement 2 are false.
C. Statement 1 is true and statement 2 is false.
D. Statement 1 is false and statement 2 is true.

33. Mr. Jindal wrote a 3-digit number on the blackboard. Three students Giya, Megha and Piya said the following about that number :

Giya : "It is a 3-digit number but not the least".

Megha : "It is 153 less than the predecessor of greatest 3-digit number".

Piya : "It is having three different digits".

What is the number?

- A. 847 B. 864 C. 764 D. 845

Space for Rough Work

34. Find the value of P + Q – R + S.

- A. 12
- B. 15
- C. 13
- D. 14

$$\begin{array}{r} 9 & 6 & 8 \\ \times & 1 & 4 \\ \hline 3 & \boxed{P} & 7 & 2 \\ \boxed{Q} & 6 & 8 & \times \\ \hline \boxed{S} & 3 & 5 & \boxed{R} & 2 \end{array}$$

35. Arrange the following in descending order.

- (P) 6 thousands 3 hundreds 0 tens 9 ones
- (Q) 6 thousands 3 hundreds 9 tens 0 ones
- (R) 6 thousands 0 hundreds 0 tens 9 ones
- (S) 6 thousands 9 hundreds 9 tens 3 ones

- A. P, Q, R, S
- B. R, P, Q, S
- C. S, Q, P, R
- D. S, Q, R, P

Space for Rough Work



LEVEL - 2

Year 2015-16

MATHEMATICS

1. Arrange the following numbers in ascending order.

P

Four hundred and twelve

R

Four thousand and three

Q

Four tens + three ones

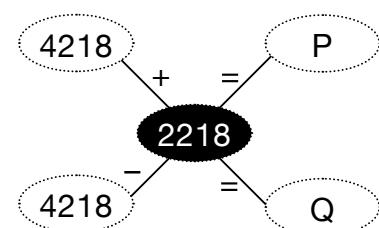
S

Four hundred and forty four

- A. P, Q, R, S B. Q, P, S, R C. R, S, P, Q D. S, R, Q, P
-

2. Find the possible values of P and Q respectively.

- A. 2000, 6436
B. 6436, 2000
C. 6336, 2000
D. Both A and B

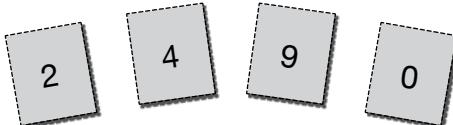


3. Fill in the blanks.

- (i) At 20 minutes past six, the minute hand points at _____.
(ii) At noon and midnight both hands point to _____.

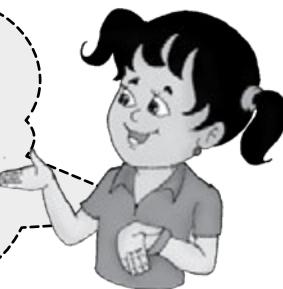
- A. (i)-6, (ii)-12 B. (i)-8, (ii)-6 C. (i)-4, (ii)-6 D. (i)-4, (ii)-12
-

4. Difference between the greatest and smallest 4-digit number formed by using given digits is _____.



- A. 6317 B. 7371 C. 6361 D. 7261
-

5. I am thinking of two different numbers. One is even and other is odd. One is successor of greatest three digit number and other is predecessor of smallest four digit number.



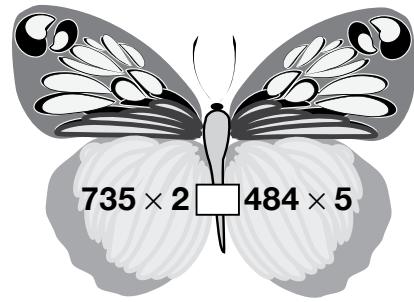
I am thinking about _____ and _____.

- A. 998, 1000 B. 1001, 1000 C. 1000, 999 D. 1000, 1001
-

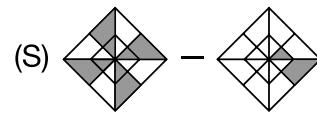
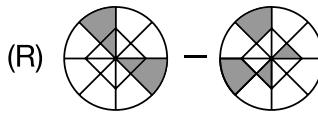
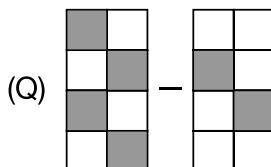
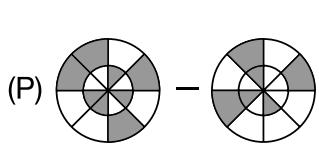
SPACE FOR ROUGH WORK

6. Fill in the box with ' $>$ ', ' $<$ ' or ' $=$ '.

- A. $>$
- B. $<$
- C. $=$
- D. Can't be determined



7. Arrange the difference of shaded fractions in descending order.



- A. (S), (Q), (R), (P) B. (S), (Q), (P), (R) C. (Q), (S), (P), (R) D. (R), (P), (Q), (S)

8. Find the value of $(P + R) - (Q + S)$.

$$\begin{array}{r} 1437 \\ + 7341 \\ \hline \end{array}$$

P

$$\begin{array}{r} 2197 \\ + 1927 \\ \hline \end{array}$$

Q

$$\begin{array}{r} 1326 \\ + 2340 \\ \hline \end{array}$$

R

$$\begin{array}{r} 1024 \\ + 5310 \\ \hline \end{array}$$

S

- A. 2902 B. 2209 C. 1986 D. 1890

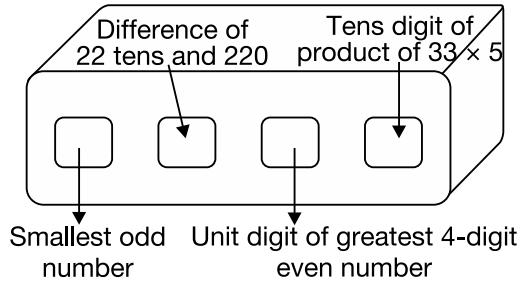
9. Which of the following multiplication fact satisfies the statement below:

Garima did 125 multiplication problems last week. If she did 8 times as many as last week than this week, then how many did she do in two weeks altogether?

- A. $125 \times 8 \times 2$
- B. $8 \times 125 + 125 \times 8$
- C. $125 + 125 \times 8$
- D. $125 \times 8 + 125 + 8$

10. Sanchi forgot the four digit code of her safe. Help her to remember the code, using the given clues.

- A. 1085
- B. 1805
- C. 1806
- D. 1086



SPACE FOR ROUGH WORK

11. If there are no holidays for festivals in the month of July but all Saturdays and Sundays are holidays, then the number of working days in July, 20XX are _____.

- A. 23
- B. 22
- C. 24
- D. 21

July 20XX						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31			

12. How many metres are in 5 km?

- A. 1000
- B. 50
- C. 200
- D. 5000

13. If Priya read 15 pages of her story book in a day, then how many pages did she read in 3 weeks?

- A. 315
- B. 45
- C. 105
- D. 300

14. Match the following.



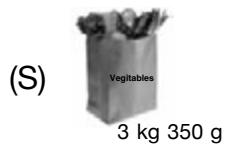
- (i) 250 g 100 g 100 g



- (ii) 2 kg 1 kg 250 g 100 g



- (iii) 1 kg 500 g 500 g 250 g 250 g



- (iv) 500 g 100 g 100 g 50 g

- A. (P)→(iv), (Q)→(i), (R)→(iii), (S)→(ii)
- B. (P)→(iv), (Q)→(iii), (R)→(ii), (S)→(i)
- C. (P)→(iv), (Q)→(iii), (R)→(i), (S)→(ii)
- D. (P)→(iii), (Q)→(iv), (R)→(i), (S)→(ii)

15. Rohan delivers 125 newspapers on weekdays. How many newspapers does he deliver in all on Sunday? Which of the following conditions will solve the given problem?

(i) He delivers 14 more papers on Sunday than on weekdays.

(ii) He works 30 days in all.

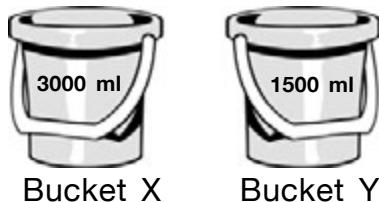
(iii) The cost of a newspaper is ₹ 2.

- A. Only (i)
- B. Only (iii)
- C. Only (ii)
- D. Both (i) and (ii)

SPACE FOR ROUGH WORK

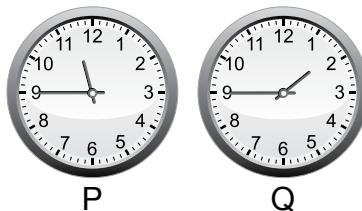
16. The 2 buckets below (not drawn to scale) are filled with water to their brim.

If 3 full glasses are needed to fill up Bucket Y, then how many glasses are needed to fill up Bucket X?



17. The two clocks P and Q below are not showing the correct time. Q is $\frac{1}{2}$ hr fast. P is 90 mins slow. What is the correct time?

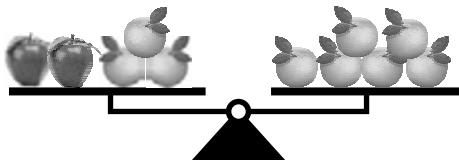
- A. 1 : 30
 - B. 12 : 30
 - C. 1 : 15
 - D. 2 : 15



18. If  represents 1296, then the shaded parts in  will represent _____.

- A. 326 B. 78 C. 486 D. 956

19. If the weight of an apple is 200 g, then find the total weight of 6 oranges and 4 apples.



20. The sum of all the even numbers between $1535 + 279$ and $1984 - 164$ is _____.

- A. 6334 B. 3634 C. 4336 D. 6364

21. In 1 minute, a machine can pack 8 big boxes of 1000 chocolates each, 3 medium boxes of 100 chocolates each and 7 small boxes of 10 chocolates each. Find the total number of chocolates the machine can pack in two minutes.

- A. 8370 B. 16080 C. 16720 D. 16740

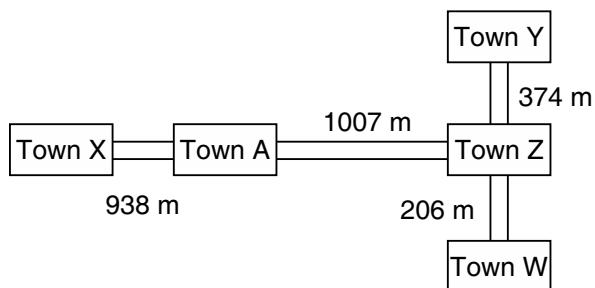
22. Sidhi worked from 9 a.m. to 3 p.m. She had an hour lunch break in between and bought herself a meal of ₹ 50. If she earned ₹ 120 per hour (excluding the lunch break), how much money is left with her after the work on that day?

SPACE FOR ROUGH WORK

23. Beena walked from Town A to Town X, then Town Z, then Town Y and then Town W using the given paths only.

What was the total distance she had travelled?

- A. 2 km 420 m
- B. 3 km 800 m
- C. 3 km 837 m
- D. 2 km 520 m



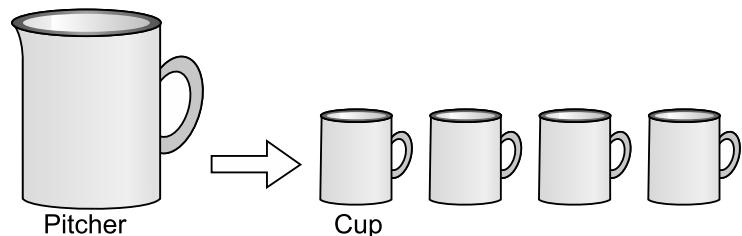
24. Which of the following satisfies the below mathematical statement?

$$9 \boxed{P} 8 \boxed{Q} 7 \boxed{R} 3 = 76$$

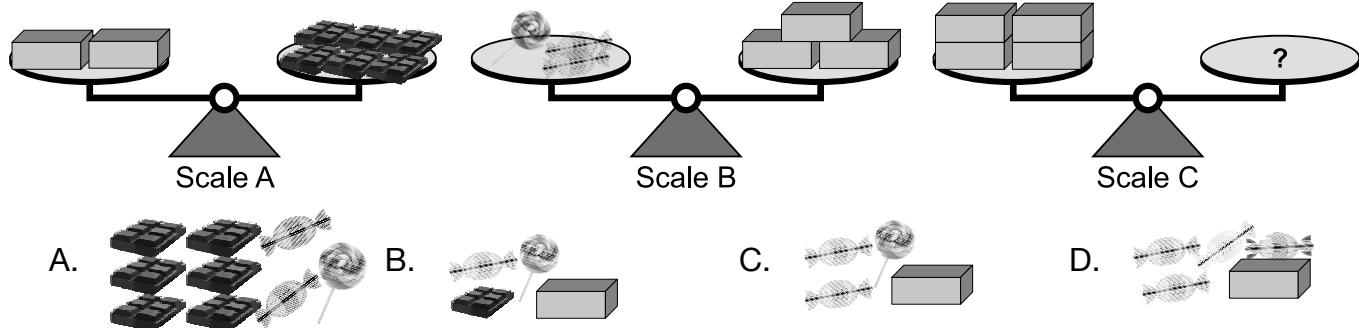
- | | | |
|-------------|----------|----------|
| P | Q | R |
| A. \times | \times | \times |
| B. $-$ | $+$ | \times |
| C. $+$ | $-$ | \times |
| D. \times | $+$ | $-$ |

25. There are 12 players in a soccer team. If each player drinks 3 cups of water after a soccer match, then how many pitchers of water will all the players drink in total?

- A. 4
- B. 6
- C. 9
- D. 12



26. Based on Scale A and Scale B, which group of objects is needed to balance the 4 bars on Scale C?



27. The sum of a mystery number and 8900 is 100 less than 9500. What is the mystery number?

- A. 600
- B. 500
- C. 700
- D. 800

SPACE FOR ROUGH WORK

28. Four buses, P, Q, R and S, arrived at a bus terminal at four different timings in the afternoon. The given chart shows the arrival times of buses P, Q, R and S respectively. Which bus was the second last to arrive at the bus terminal?

- A. P B. Q
C. R D. S

Bus	Arrival time
P	Quarter past 3
Q	Half past 3
R	10 minutes to 3
S	Quarter to 3

29. Which of the following statements is FALSE?

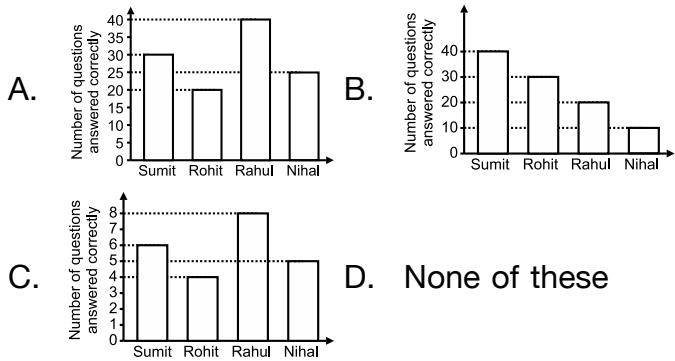
- A. The sum of two odd numbers is an odd number.
B. The sum of an odd number and an even number is an odd number.
C. The difference between two even numbers is an even number.
D. The difference between two odd numbers is an even number.

30. Trishika was born in 2015. Her younger brother is born in the leap year following the year she was born. In which year is her brother born?

- A. 2016 B. 2012 C. 2014 D. 2020

ACHIEVERS SECTION

31. Which of the following bar graphs correctly represent the data in the given pictograph showing the number of correct answers marked by four friends in Maths test?



Sumit	
Rohit	
Rahul	
Nihal	

1  = 5 questions answered correctly

32. Find the value of $P + Q + R + S$.

- A. 15
B. 19
C. 18
D. 16

$$\begin{array}{r}
 & 7 & 1 & 5 \\
 & \times & P & 5 \\
 \hline
 & 3 & 5 & Q & 5 \\
 + & 1 & 4 & R & 0 & 0 \\
 \hline
 & 1 & 7 & 8 & S & 5
 \end{array}$$

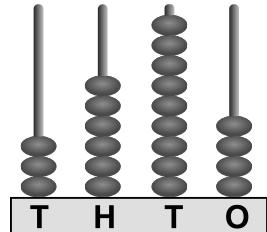
SPACE FOR ROUGH WORK

33. Savita walked for 30 minutes on Monday morning. If she increases her walking time by 10 minutes every day, then on coming Friday she will walk for _____.

- A. 1 hour 10 mins B. 50 mins C. 1 hour D. 40 mins
-

34. If 2 more beads are added at thousands place, 3 beads are taken away from hundreds place and tens place each, 2 more beads are added at ones place, then number name of new number formed on abacus is _____.

- A. Six thousand five hundred thirty six
B. Five thousand three hundred sixty six
C. Five thousand three hundred ninety six
D. Three thousand five hundred sixty six
-



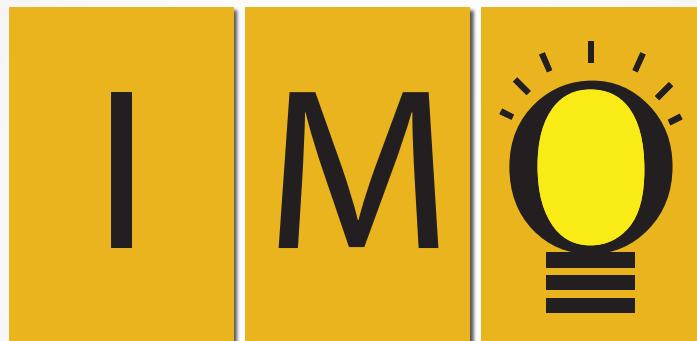
35. Following are the ages of six children :

- Atharva's age is 2 years and 3 months.
- Veenu's age is 2 years and 4 months.
- Avika's age is 3 years and 2 months.
- Aastha's age is 5 years and 6 months.
- Mohit's age is 5 years and 7 months.
- Aanya's age is 4 years and 11 months.

Arrange them according to their ages from the youngest to the oldest.

- A. Veenu, Atharva, Aanya, Avika, Aastha, Mohit
B. Mohit, Aastha, Aanya, Avika, Veenu, Atharva
C. Atharva, Aastha, Veenu, Aanya, Avika, Mohit
D. Atharva, Veenu, Avika, Aanya, Aastha, Mohit
-

SPACE FOR ROUGH WORK

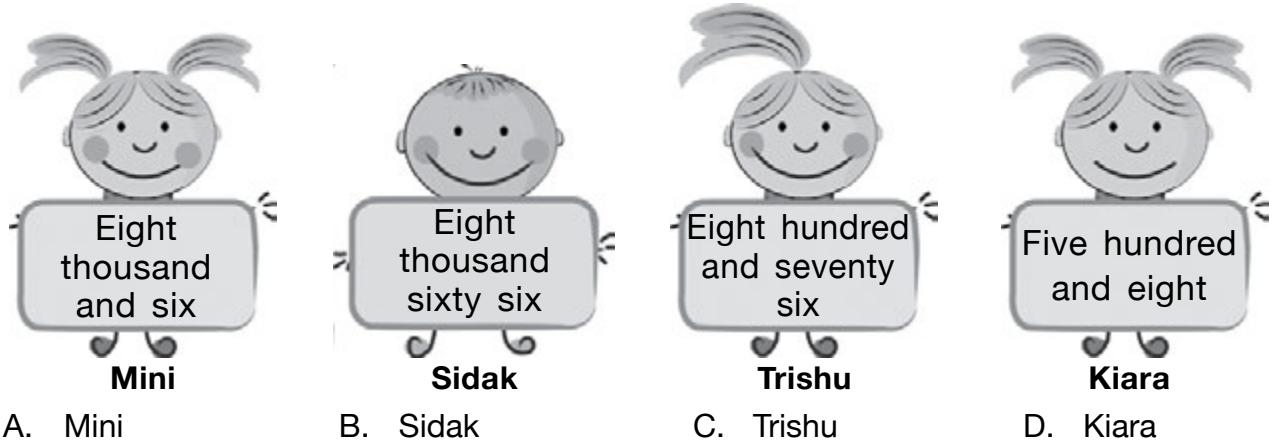


LEVEL - 2

Year 2016-17

MATHEMATICS

1. Which of the following is holding the card with greatest number?

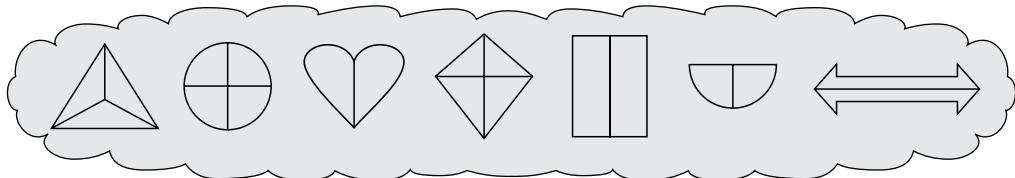


2. _____ is 145 less than the sum of 198 and 2058.

A. 2401 B. 2011 C. 2111 D. 2041

3. How many figures are NOT divided into halves?

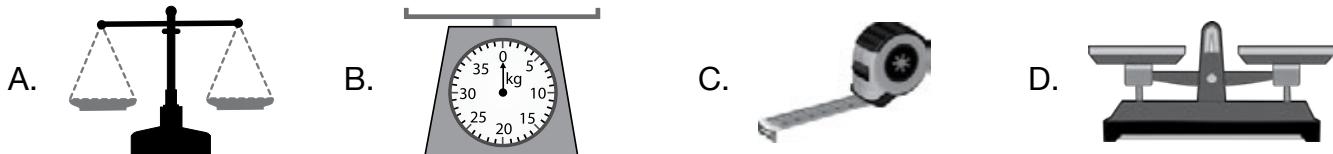
A. 2
B. 3
C. 4
D. 5



4. Mohit and Samrath spend ₹ 8010 and ₹ 5013 respectively and left with same amount of money. If Mohit had ₹ 65 left with him, how much money did Samrath have at first?

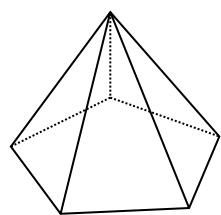
A. ₹ 8075 B. ₹ 2997 C. ₹ 5708 D. ₹ 5078

5. Select the odd one out.



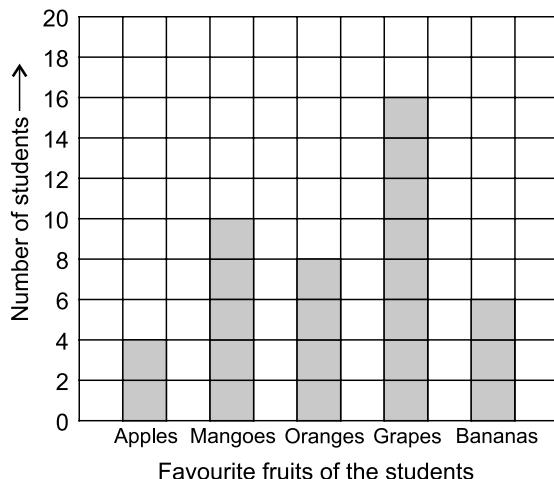
6. How many faces does the given figure have ?

A. 5
B. 6
C. 7
D. 8

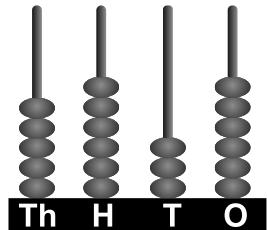


SPACE FOR ROUGH WORK

(Direction 7-9) : The given bar graph shows the favourite fruits of the students in class 3A. Study the bar graph carefully and answer the following questions.



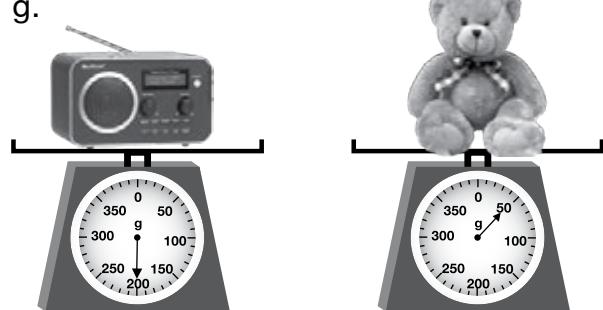
7. There are _____ more students who like grapes than mangoes.
A. 16 B. 5 C. 6 D. 10
8. There are _____ fewer students who like apples than bananas.
A. 6 B. 4 C. 10 D. 2
9. There are _____ students in the class who like apples, mangoes, oranges and bananas altogether.
A. 28 B. 38 C. 46 D. 36
-
10. The number represented by the given abacus is
A. 5636
B. 6365
C. 6543
D. 5643
-
11. Which of the following statements is INCORRECT?
A. 5 thousands + 4 hundreds + 5 tens + 4 ones is equal to 5454.
B. The place value of 2 in 6327 is 20.
C. The smallest 4-digit number formed by the digits 2, 0, 7, 6 (using each digit only once) is 0267.
D. 3178 is an even number.



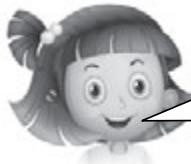
SPACE FOR ROUGH WORK

12. The teddy is lighter than the radio by _____ g.

- A. 100
- B. 200
- C. 150
- D. 250



13. Identify the number.



I am a number
between $2520 \div 2$
and $8834 \div 7$.

- A. 1260
- B. 1261
- C. 1262
- D. 1263

14. Find the value of $(P + Q) - (S - R)$.

- A. 9
- B. 8
- C. 10
- D. 7

$$\begin{array}{r} 9 \boxed{P} 8 \boxed{Q} \\ - 1 \ 1 \boxed{R} 5 \\ \hline \boxed{S} 7 \ 0 \ 7 \end{array}$$

15. Which of the following is the smallest fraction?

- A. $\frac{1}{2}$
- B. $\frac{1}{4}$
- C. $\frac{1}{3}$
- D. $\frac{1}{8}$

16. If $\heartsuit \div \star = 2$ and $\star \times \star = 16$, then $\heartsuit + \star =$ ____

- A. 8
- B. 4
- C. 12
- D. 16

17. Which of the following clocks shows 5 minutes to 3 ?



18. 1246 persons visited a fair on the first day. 2134 more persons than the first day visited the fair on the second day. 3679 more persons than the second day visited the fair on the third day. How many persons visited the fair on the third day?

- A. 7095
- B. 7059
- C. 6182
- D. 8059

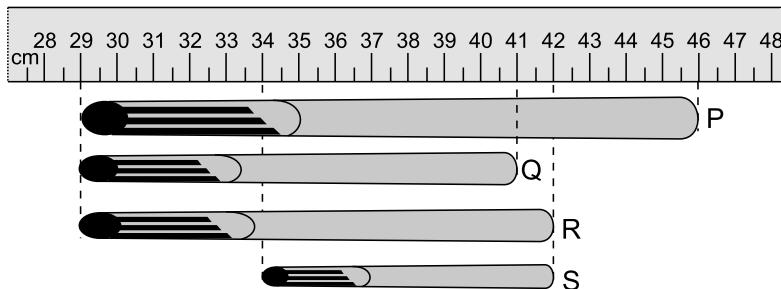
SPACE FOR ROUGH WORK

19. Fill in the blanks.

- (a) When a number is divided by 1, then the quotient is P.
(b) When a number is divided by itself, then the quotient is Q.

P	Q
A. 1	Number itself
B. Number itself	1
C. Number itself	Number itself
D. 1	1

(Direction 20-21) : Study the given figure and answer the following questions.



20. Marker _____ and marker _____ have a total length of 25 cm.

- A. P, S B. P, Q C. Q, S D. R, S

21. Marker P is _____ cm longer than marker R.

- A. 4 B. 3 C. 2 D. 8

22. What fraction of the given rectangle is unshaded?



- A. $\frac{1}{6}$ B. $\frac{4}{5}$ C. $\frac{1}{5}$ D. $\frac{5}{6}$

23. The given clock shows the present time in the morning. What was the time two hours ago?

- A. 7:05 am B. 11:05 am
C. 8:05 am D. 12:05 am



SPACE FOR ROUGH WORK

24. Mrs Kapoor bought 10 dozen of eggs. She used 5 dozen of eggs to bake some cookies. She used another 5 eggs to make an omelette. How many eggs were left?

- A. 45 B. 60 C. 55 D. 490
-

25. Find the values of X and Y respectively.

$$\boxed{X} \xrightarrow{+ 250} \boxed{990} \xrightarrow{- Y} \boxed{330}$$

- A. 740, 660 B. 660, 740 C. 720, 660 D. 620, 740
-

26. 256 photographs are to be kept in albums. The albums available in a shop hold 16 photographs each. How many albums you should buy?

- A. 10 B. 15 C. 16 D. 20
-

27. A bucket can hold 7 L 450 mL of water. Express its capacity in millilitres.

- A. 7450 mL B. 7540 mL C. 7045 mL D. 7000 mL
-

28. Sam bought one kg of tea in a plastic jar. The jar is filled to the brim and could not contain any more tea. Choose the correct statement.

- A. The capacity of the plastic jar is 10 hg of tea.
B. The capacity of the plastic jar is 1000 g of tea.
C. The capacity of the plastic jar is 1000000 mg of tea.
D. All of these
-

(Direction 29-30) : Study the given figures carefully and answer the following questions.

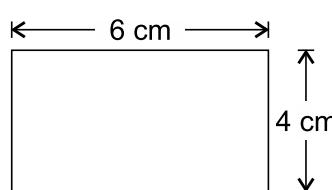


Figure A

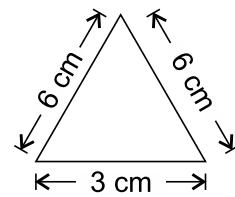


Figure B

29. Figure A is a _____.

- A. Cube B. Square C. Triangle D. Rectangle

30. The total length of Figure B is _____.

- A. 6 cm B. 9 cm C. 12 cm D. 15 cm
-

SPACE FOR ROUGH WORK

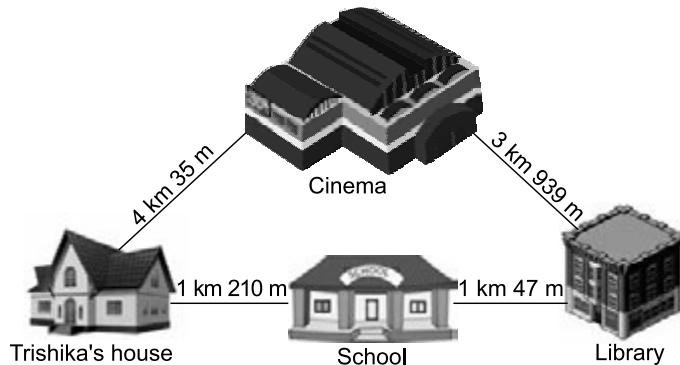
ACHIEVERS SECTION

31. If X is a 4-digit number, then find X using the given clues.

- The sum of all its digits is 17.
- The sum of the digits at the tens and hundreds place is the digit at the thousands place.
- The digit at the ones place is one less than the digit at thousands place.
- The digit at tens place is twice the digit at hundreds place.
- The digit at hundreds place is 2.

- A. 4625 B. 6425 C. 6245 D. 5246

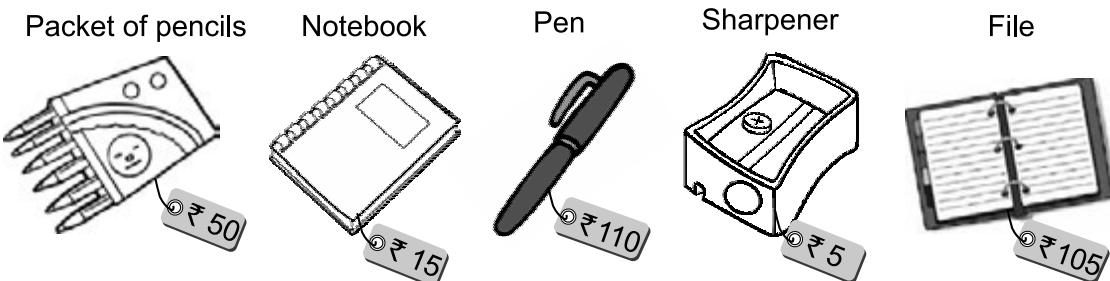
32. Study the given map and answer the following question.



Trishika wants to go to the library. Which way is the shortest and by how much?

- A. House - Cinema - Library, 5 km 717 m B. House - School - Library, 5 km 717 m
C. House - Cinema - Library, 5 km 817 m D. House - School - Library, 5 km 817 m

33. There are following items in a stationary shop.



Sanchi bought a file, a packet of pencils and a notebook. She gave the cashier ₹ 2000. How much change did she receive?

- A. ₹ 1800 B. ₹ 1850 C. ₹ 1830 D. ₹ 1730

SPACE FOR ROUGH WORK

34. Samaksh is a part-time lecturer. He is paid ₹ 225 per hour. The given table shows the number of hours he teaches in a week. How much does Samaksh earn in a week?

Days	Number of hours
Monday	3
Tuesday	2
Wednesday	3
Thursday	4
Friday	2
Saturday	5

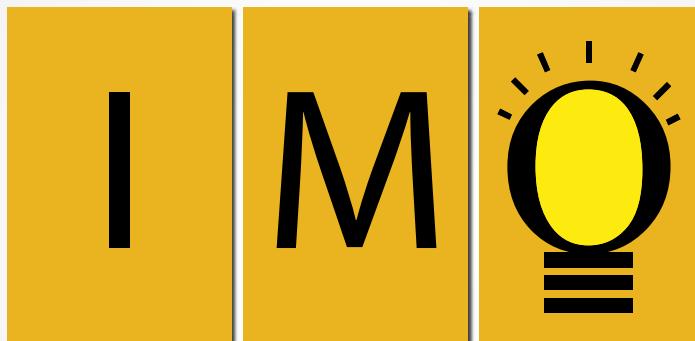
- A. ₹ 4200 B. ₹ 3275 C. ₹ 4275 D. ₹ 1275

35. Find the values of P, Q, R and S.

- (a) $1 \text{ kg } \boxed{P} \text{ g} = 300 \text{ g} + 1500 \text{ g}$ (b) $600 \text{ g} = 200 \text{ g} + \boxed{Q} \text{ g}$
(c) $1 \text{ kg } 200 \text{ g} = 900 \text{ g} + \boxed{R} \text{ g}$ (d) $2 \text{ kg} = \boxed{S} \text{ g} + 1200 \text{ g}$

- | P | Q | R | S |
|--------|-----|------|-----|
| A. 800 | 200 | 1000 | 2 |
| B. 800 | 800 | 300 | 400 |
| C. 800 | 300 | 400 | 800 |
| D. 800 | 400 | 300 | 800 |

SPACE FOR ROUGH WORK



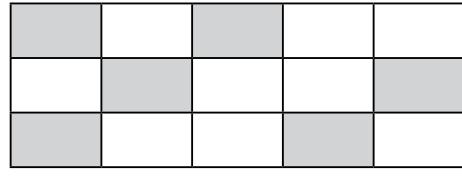
LEVEL - 2

Year 2017-18

MATHEMATICS

1. What fraction of the given figure is unshaded?

A. $\frac{6}{9}$
B. $\frac{9}{15}$
C. $\frac{5}{9}$
D. $\frac{6}{15}$

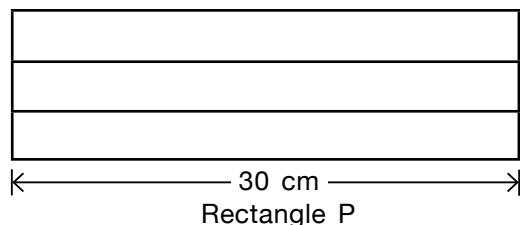


2. There is 6 L 225 mL of juice in 5 identical cartons of juice. How much juice is there in 2 such cartons?

A. 2 L 495 mL B. 2 L 490 mL C. 2 L 540 mL D. 2 L 390 mL

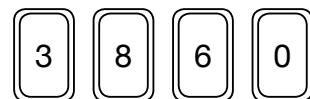
3. Given rectangle P is made up of 3 equal rectangles. If the total sum of lengths and breadths of rectangle P is 84 cm, then find the breadth of each small rectangle.

A. 3 cm
B. 5 cm
C. 6 cm
D. 4 cm



4. Using the given cards, find the number name of the smallest four digit number formed (use each digit only once).

A. Three hundred sixty eight
B. Three thousand six hundred eight
C. Three thousand sixty eight
D. Three thousand eighty six

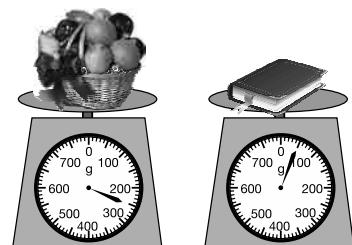


5. The cost of a toy car is same as that of the cost of two dolls. The cost of a toy car is ₹ 146. Find the amount spent by Ashima if she buys two such toy cars and six dolls.

A. ₹ 725 B. ₹ 870 C. ₹ 580 D. ₹ 730

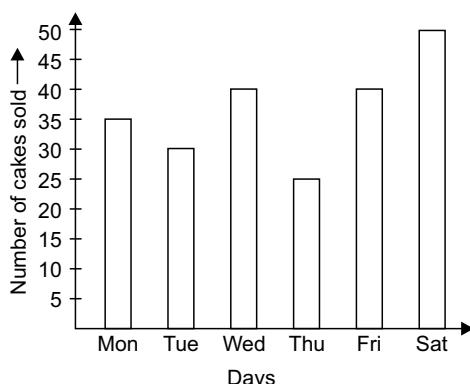
6. The basket of fruits is _____ g heavier than the book.

A. 200
B. 195
C. 205
D. 190

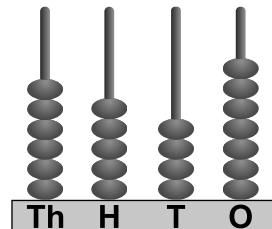


SPACE FOR ROUGH WORK

Direction (7-9) : Read the given graph showing the number of cakes sold by a bakery and answer the following questions.



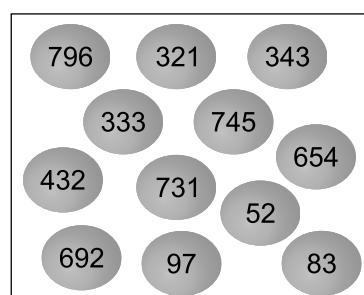
7. Out of the given options, the bakery sold 75 cakes on _____ and _____ altogether.
- Monday, Saturday
 - Wednesday, Friday
 - Tuesday, Friday
 - Thursday, Saturday
8. The bakery sold _____ fewer cakes on Saturday than Monday and Friday altogether.
- 25
 - 35
 - 20
 - 32
9. If each cake is sold for ₹ 155, then find the amount earned by the bakery on Tuesday and Thursday altogether.
- ₹ 9545
 - ₹ 8525
 - ₹ 8475
 - ₹ 8435
-
10. If the digit at hundreds place is interchanged with the digit at ones place of the number shown by the abacus, then find the difference between the new number and the original number.
- 198
 - 191
 - 203
 - 196



11. Study the given numbers carefully and answer the question that follows.

What fraction of numbers have an odd digit at tens place?

- $\frac{8}{12}$
- $\frac{9}{12}$
- $\frac{6}{12}$
- $\frac{10}{12}$



SPACE FOR ROUGH WORK

12. 1456 tickets of a magic show were sold on Monday. 2043 more tickets were sold on Tuesday than the number of tickets sold on Monday. 3946 more tickets were sold on Wednesday than the number of tickets sold on Tuesday. How many tickets were sold on Monday and Wednesday altogether?

- A. 7445 B. 9488 C. 9071 D. 8901
-

13. What is the missing number in the box?

$$\boxed{?} \longrightarrow \boxed{\div 4} \longrightarrow \boxed{- 57} \longrightarrow \boxed{\times 8} \longrightarrow \boxed{+ 4} = \boxed{420}$$

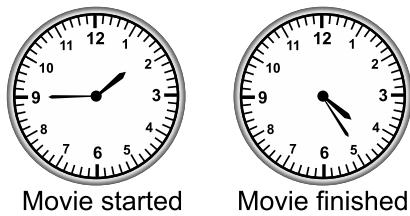
- A. 408 B. 436 C. 512 D. 524
-

14. Kavya bought 12 dozen of bananas. She gave 5 dozen bananas to her brother and used 8 bananas to make a shake. How many bananas were left with her?

- A. 76 B. 74 C. 82 D. 86
-

15. The given clocks show the time at which a movie started and finished. How long was the movie?

- A. 2 hrs 30 mins
B. 2 hrs 45 mins
C. 2 hrs 40 mins
D. 2 hrs 25 mins



16. Fill in the blanks.

- The difference between the smallest 4 digit number and the greatest 3 digit number is P.
- The place value of 3 in six thousand four hundred thirty five is Q.
- $2000 + 400 + 6$ is same as R.
- S should be added to 809 to make it the greatest three digit number.

P	Q	R	S
A. 1	30	2460	99
B. 100	3	2460	190
C. 100	30	2406	99
D. 1	30	2406	190

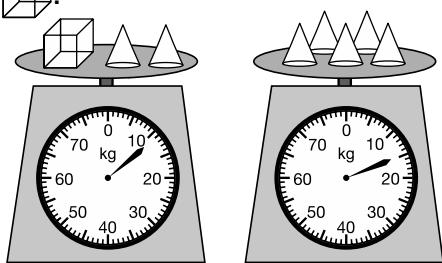
17. Sahil has 7 times as many candies as Prince. If Sahil has 343 candies, then how many candies they both have altogether?

- A. 59 B. 49 C. 294 D. 392
-

SPACE FOR ROUGH WORK

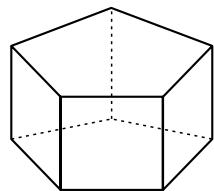
18. Study the given figures carefully and find the weight of  .

- A. 10 kg
- B. 18 kg
- C. 22 kg
- D. 14 kg

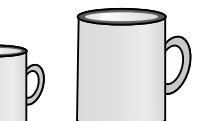


19. How many faces does the given figure have ?

- A. 6
- B. 7
- C. 8
- D. 9



20. A bucket can hold 2 litres of water. It is being filled by the mugs of different capacities. Which of the following combinations of mugs can fill the bucket?

- A.      
200 mL 200 mL 250 mL 250 mL 500 mL 500 mL
- B.     
250 mL 250 mL 300 mL 500 mL 500 mL
- C.      
250 mL 250 mL 250 mL 250 mL 500 mL 500 mL
- D.      
200 mL 250 mL 250 mL 250 mL 500 mL 500 mL

21. Rohan distributed ₹ 9876 equally among 12 children. How much amount did each child get?

- A. ₹ 976
- B. ₹ 856
- C. ₹ 793
- D. ₹ 823

22. Niharika uses 76 pearls to make a necklace. How many pearls are needed to make 48 such necklaces?

- A. 3648
- B. 4236
- C. 3426
- D. 3958

SPACE FOR ROUGH WORK

23. Find the value of $P + Q - R + S$.

$$\begin{array}{r}
 & 7 & P & 3 & R \\
 - & 3 & 8 & Q & 9 \\
 \hline
 & S & 5 & 7 & 7
 \end{array}$$

24. Mr Sharma's family went to a nearby beach for picnic.

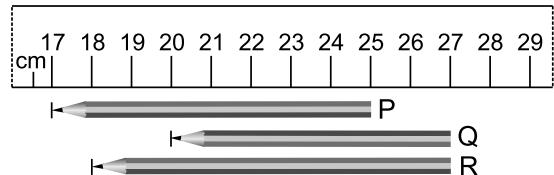
Mr Sharma's family took a sand castle kit, 3 towels and 2 umbrellas on rent.

How much did it cost to them?

BEACH RENTALS	
Sand castle kit	- ₹ 75
Umbrella	- ₹ 35
Towel	- ₹ 25

25. Pencil P and pencil R have a total length of _____ cm.

- A. 17
 - B. 16
 - C. 18
 - D. 19



26. Anushka has 75 flowers. She gave $\frac{1}{3}$ of the flowers to her brother and $\frac{1}{5}$ of the remaining to her sister. How many flowers she gave to her sister?

- A. 25 B. 15 C. 12 D. 10

27. Riya's room has 5 shelves to keep books. Each shelf can have 13 books. If Riya has 82 books, then how many books will be left after arranging the books on 5 shelves?

- A. 17 B. 15 C. 21 D. 19

28. Study the statements carefully and select the CORRECT option.

- P. When a number is divided by itself, then the quotient is 0.

- Q. When a number is divided by 1, then the quotient is number itself.

- A. Both P and Q are true.

- B. Both P and Q are false.

- C. P is true but Q is false.

- D. P is false but Q is true.

29. Identify the number using the given clues.



- I am an even number.
 - My tens digit is the least one digit odd number.
 - My hundreds digit is 4 more than my tens digit.
 - My thousands digit is the greatest one digit even number.

- A. 8732 B. 8514 C. 8513 D. 9154

SPACE FOR ROUGH WORK

30. Trishi is meeting her friends for dinner at 7 p.m. The journey to the restaurant takes 55 minutes. What time must she leave her house if she wants to reach restaurant on time?
 A. 6 : 05 a.m. B. 6 : 05 p.m. C. 6 : 10 p.m. D. 7 : 10 p.m.

ACHIEVERS SECTION

31. If $\star + \star = \odot$; $\star + \odot = \frac{6}{8}$ and $\triangle + \triangle = \star$, then the values of \star , \odot and \triangle respectively are
 A. $\frac{1}{8}, \frac{4}{8}, \frac{2}{8}$ B. $\frac{2}{8}, \frac{1}{8}, \frac{4}{8}$ C. $\frac{2}{8}, \frac{4}{8}, \frac{1}{8}$ D. $\frac{4}{8}, \frac{2}{8}, \frac{1}{8}$

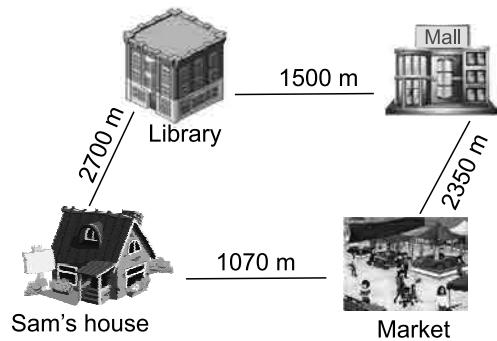
32. Study the given figure carefully.

Route 1 – Sam's house – Library – Mall

Route 2 – Market – Mall – Library

Which is the longer route and by how much?

- A. Route 1, 250 m
 B. Route 2, 4200 m
 C. Route 1, 350 m
 D. Route 2, 350 m



33. Six friends went for shopping. They bought the following items.

CHHAVI
Shoes - ₹ 375
Jeans - ₹ 590
Bellies - ₹ 460

VIJAY
Belt - ₹ 185
Shirt - ₹ 470
Jacket - ₹ 745

SANAM
Shoes - ₹ 180
Jacket - ₹ 690
Jeans - ₹ 465

ANKITA
Jeans - ₹ 550
Jacket - ₹ 425
Heels - ₹ 375

SUHANA
Shirt - ₹ 315
Saree - ₹ 765
Jeans - ₹ 240

SAMRAT
Jeans - ₹ 745
Shirt - ₹ 355
Belt - ₹ 145

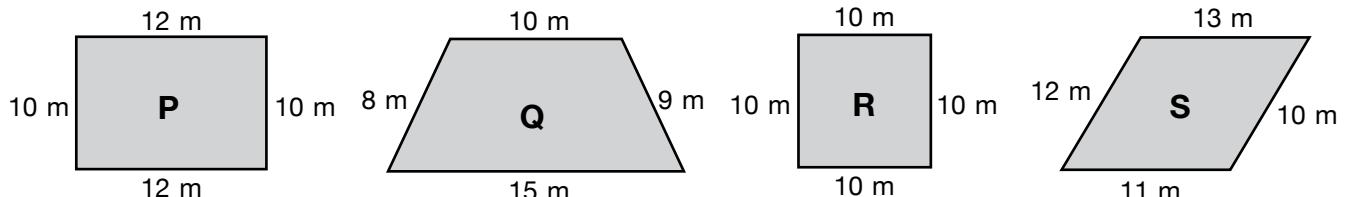
On the basis of the given information, fill in the blanks.

1. _____ (a) spent ₹ 1350 on shopping. 2. _____ (b) spent the least amount.
 3. _____ (c) spent the most amount.

- | (a) | (b) | (c) |
|-----------|--------|--------|
| A. Ankita | Suhana | Sanam |
| B. Ankita | Samrat | Chhavi |
| C. Vijay | Samrat | Sanam |
| D. Vijay | Suhana | Chhavi |

SPACE FOR ROUGH WORK

34. Study the four different gardens P, Q, R and S given below and answer the questions.



- (a) Which garden has the largest boundary?
 - (b) Which garden has the smallest boundary?

- | (a) | (b) |
|------|-----|
| A. S | Q |
| B. P | R |
| C. S | R |
| D. P | Q |

35. Find the value of $\frac{(R \times S) - Q}{P}$.

- A. 13
 - B. 15
 - C. 11
 - D. 18

$$\begin{array}{r}
 & 8 \boxed{Q} 2 \\
 9) & 7758 \\
 - & 7 \boxed{P} \downarrow \\
 \hline
 & 55 \\
 - & 5 \boxed{R} \downarrow \\
 \hline
 & 1 \boxed{S} \\
 - & 18 \\
 \hline
 & 0
 \end{array}$$

SPACE FOR ROUGH WORK

ANSWER KEYS

IMO 2013

1.	(A)	2.	(A)	3.	(C)	4.	(B)	5.	(D)	6.	(C)	7.	(A)
8.	(A)	9.	(C)	10.	(C)	11.	(C)	12.	(A)	13.	(A)	14.	(C)
15.	(D)	16.	(D)	17.	(C)	18.	(A)	19.	(A)	20.	(C)	21.	(A)
22.	(B)	23.	(C)	24.	(D)	25.	(C)	26.	(B)	27.	(D)	28.	(C)
29.	(D)	30.	(D)	31.	(C)	32.	(D)	33.	(C)	34.	(B)	35.	(D)

IMO 2014

1.	(C)	2.	(D)	3.	(A)	4.	(D)	5.	(B)	6.	(B)	7.	(C)
8.	(C)	9.	(C)	10.	(B)	11.	(C)	12.	(D)	13.	(A)	14.	(C)
15.	(B)	16.	(D)	17.	(C)	18.	(D)	19.	(A)	20.	(D)	21.	(D)
22.	(C)	23.	(C)	24.	(B)	25.	(D)	26.	(A)	27.	(B)	28.	(C)
29.	(B)	30.	(B)	31.	(D)	32.	(B)	33.	(D)	34.	(C)	35.	(C)

2015 IMO-Level 2 was an online exam. Hence, paper cannot be included in the booklet.

IMO 2016

1.	(B)	6.	(B)	11.	(A)	16.	(D)	21.	(D)	26.	(C)	31.	(A)
2.	(D)	7.	(B)	12.	(D)	17.	(C)	22.	(C)	27.	(B)	32.	(B)
3.	(D)	8.	(C)	13.	(A)	18.	(C)	23.	(C)	28.	(A)	33.	(A)
4.	(B)	9.	(C)	14.	(C)	19.	(A)	24.	(D)	29.	(A)	34.	(B)
5.	(C)	10.	(D)	15.	(A)	20.	(B)	25.	(C)	30.	(A)	35.	(D)

IMO 2017

1.	(B)	2.	(C)	3.	(B)	4.	(D)	5.	(C)	6.	(B)	7.	(C)
8.	(D)	9.	(A)	10.	(A)	11.	(C)	12.	(C)	13.	(B)	14.	(A)
15.	(D)	16.	(C)	17.	(A)	18.	(B)	19.	(B)	20.	(A)	21.	(A)
22.	(D)	23.	(A)	24.	(C)	25.	(A)	26.	(C)	27.	(A)	28.	(D)
29.	(D)	30.	(D)	31.	(C)	32.	(B)	33.	(C)	34.	(C)	35.	(D)

IMO 2018

1.	(B)	6.	(A)	11.	(A)	16.	(D)	21.	(D)	26.	(D)	31.	(C)
2.	(B)	7.	(D)	12.	(D)	17.	(D)	22.	(A)	27.	(A)	32.	(C)
3.	(D)	8.	(A)	13.	(B)	18.	(A)	23.	(C)	28.	(D)	33.	(B)
4.	(C)	9.	(B)	14.	(A)	19.	(B)	24.	(B)	29.	(B)	34.	(C)
5.	(D)	10.	(A)	15.	(C)	20.	(C)	25.	(A)	30.	(B)	35.	(A)