INTERNATIONAL SOCIETY FOR OLYMPIAD

Empowering children to become Global Olympiad Champions

Eupheus Learning

MATHS OLYMPIAD

PRACTICE BOOK

GRADE 6

The Math Olympiad series is an initiative of International Society for Olympiad (ISFO)

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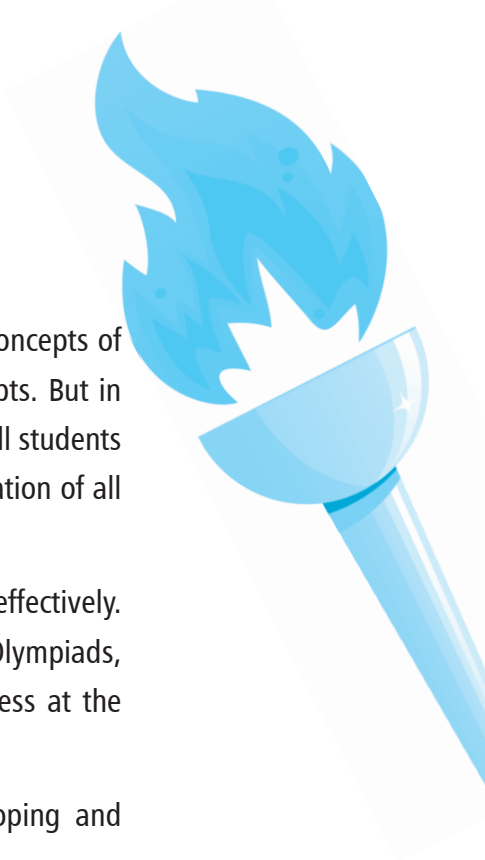
Preface



Our education system effectively provides an introduction to the concepts of Math and Science and helps us understand the underlying concepts. But in its overly generalized approach, which aims to enlighten and test all students of varying caliber and interests, it leaves the exploration of application of all these concepts completely on the students.

This workbook is designed to enable students to explore Maths effectively. Designed in accordance with the requirements of the Maths Olympiads, the workbook is an efficient tool to achieve comprehensive success at the **ISFO – Maths Olympiad.**

The main aim of this workbook is to assist students in developing and improving their ability to solve problems.

Each chapter of the book consists of 3 sets of questions.

- **Section A** (Mathematical Reasoning) : This section is created to test the knowledge of mathematical concepts and topic pertaining to the respective grades.
- **Section B** (Everyday Maths) : This section deals with the application.
- **Section C** (BrainBox) : Questions to prepare students with HOTS (Higher Order Thinking Skills) based on the syllabus provided.

Logical Reasoning section is provided to equip students with verbal and non-verbal analysis and reasoning skills.

Sample Test Papers and Answer keys have been provided to accelerate the learning process.

Contents

Chapter

1 Knowing Our Numbers

SECTION - A : MATHEMATICAL REASONING

1. When 1 is added to the greatest four digit number, the result is the

a. greatest 5-digit number
b. smallest 5-digit number
c. greatest 4-digit number
d. smallest 4-digit number

2. The sum of the number 765432 and the number obtained by reversing its digits is

a. 930865 b. 980356
c. 999999 d. 9999998

3. 1 billion is equivalent to

a. 1 crore b. 10 crore
c. 100 crore d. 1000 crore

4. The sum of 6 numbers is 96. The average of these 6 numbers is

a. 15 b. 16
c. 19 d. 25

5. Which of the following is the greatest 4-digit number made using the digits 3, 8 and 7, taking any one digit twice?

a. 33387 b. 8378
c. 8873 d. 8773

6. A society needs ₹1,85,36,000 to buy a property. It collected ₹72,53,840 as membership fee, took a loan of ₹56,75,450 from a bank and collected ₹29,37,680 as donation. How much more a society needs to buy the property?

a. ₹24,567,788 b. ₹26,69,030
c. ₹34,656,767 d. ₹34,66,427

7. The number of 2-digit numbers that can be formed using the digits 1, 3, 6 and 9, taking each digit only once is

a. 13 b. 12
c. 14 d. 15

8. The smallest 7-digit number with four different digits is

a. 98,76,323 b. 12,33,333
c. 10,00,023 d. 11,22,233

9. The cost of 225 washing machines is ₹4,35,375. The cost of one washing machine is

a. ₹1,935 b. ₹1,245
c. ₹1,456 d. ₹1,350

10. The Hindu-Arabic numeral of the Roman numeral CDXLIV is

a. 555 b. 444
c. 666 d. 888

11. The price of 2 sarees and 4 shirts is ₹1600. In this amount, one can also buy 1 saree and 6 shirts. If we buy 12 shirts, how much shall we pay?

a. ₹1200 b. ₹2400
c. ₹4800 d. Cannot be determined

12. In a regular week, there are 5 working days and for each day, the number of working hours is 8. A man gets ₹2.40 per hour for regular work and ₹3.20 per hour for overtime. If he earns ₹432 in 4 weeks, then how many hours does he work for?

a. 160 b. 175
c. 180 d. 195

13. **A man has some hens and cows. If the number of heads is 48 and the number of feet is 140, then the number of hens will be**

a. 22 b. 23

c. 24 d. 26

14. **The greatest number that will divide 43, 91 and 183 so as to leave the remainder 3 in each case is**

a. 4 b. 7

c. 9 d. 13

15. **Six bells commence tolling together and toll at intervals of 2, 4, 6, 8, 10 and 12 seconds, respectively. In 30 minutes, how many times do they toll together?**

a. 4 b. 10

c. 15 d. 16

16. **One-third of Rahul's savings in National Savings Certificate is equal to one-half of his savings in Public Provident Fund. If he has ₹1,50,000 as total savings, then how much has he saved in Public Provident Fund?**

a. ₹30,000 b. ₹50,000

c. ₹60,000 d. ₹90,000

17. **The number of students in classes VI and VII of the school are 254 and 329, respectively. The estimated sum of number of students to the nearest hundreds is**

a. 600 students b. 500 students

c. 700 students d. 800 students

18. **In 1322 hours, there are _____ minutes.**

a. 79320 minutes b. 3456 minutes

c. 23456 minutes d. 12768 minutes

19. **A student multiplied 8236 by 54 instead of multiplying by 45. How much is his answer greater than the correct answer?**

a. 74124 b. 34523

c. 12654 d. 12987

20. **The greatest 4-digit number formed using any four different digits, keeping the digit 6 always in the tens place, is**

a. 9876 b. 8768

c. 9867 d. 9768

SECTION - B : EVERYDAY MATHS

21. **There were three candidates in an election. They received 6,87,905 votes, 4,95,086 votes and 93,756 votes, respectively. The number of invalid votes was 13,849. If 25,467 persons did not vote, then the number of votes registered were**

a. 13,16,063 b. 41,32,000

c. 43,52,767 d. 34,56,677

22. **A survey conducted on an Indian state shows that 16,23,546 people have only primary education; 97,68,678 people have secondary education; 68,37,954 people have higher education and 26,84,536 people are illiterate. If the number of children below the desired (usual) age of school admission is 6,98,781, then the total population of the state is**

a. 2,16,13,495 b. 2,39,07,889

c. 2,38,76,678 d. 2,38,67,688

23. **There are 3445 students in a school. Out of these, 2789 are girls. The estimated number of boys to the nearest hundreds is**

a. 1455 b. 1500

c. 700 d. 400

24. **The price of 10 chairs is equal to that of 4 tables. The price of 15 chairs and 2 tables together is ₹4000. The total price of 12 chairs and 3 tables is**

a. ₹3500 b. ₹3750

c. ₹3840 d. ₹3900

25. A man has ₹480 in the denominations of 1-rupee notes, 5-rupee notes and 10-rupee notes. The number of notes of each denomination are equal to each other. What is the total number of notes that he has?

a. 45 b. 60

c. 75 d. 90

SECTION - C : BRAINBOX

26. Free notebooks were distributed equally among children of a class. The number of notebooks each child got was one-eighth of the number of the children. Had the number of children been half, each child would have got 16 notebooks. How many notebooks were distributed in all?

a. 256 b. 432

c. 512 d. 640

27. David gets on an elevator at the 11th floor of a building and rides up at the rate of 57 floors per minute. At the same time, Albert gets on the elevator at the 51st floor of the same building and rides down at the rate of 63 floors per minute. If they continue to travel at these rates, then on which floor will their paths cross?

a. 19 b. 28

c. 30 d. 37

28. There are two examination rooms—A and B. If 10 students are shifted from room A to B, then the number of students in each room is the same. If 20 candidates are shifted from room B to A, then the number of students in A is double the number of students in B. The number of students in room A is

a. 20 b. 80

c. 100 d. 200

29. Eight people are planning to share equally the cost of a rental car. If one person withdraws from the arrangement and the others share equally the entire cost of the car, then the share of each of the remaining persons is increased by

a. $\frac{1}{56}$ b. $\frac{1}{8}$

c. $\frac{1}{7}$ d. $\frac{7}{8}$

30. A mobile number consists of ten digits. The first four digits are 9, 9, 8, 7. The smallest possible number by using two digits twice from 6, 5, 0, 2 is

a. 9987200056 b. 9988377720

c. 9987665445 d. 9998754660

Darken your choice with HB pencil

1.	a b c d	9.	a b c d	17.	a b c d	25.	a b c d
2.	a b c d	10.	a b c d	18.	a b c d	26.	a b c d
3.	a b c d	11.	a b c d	19.	a b c d	27.	a b c d
4.	a b c d	12.	a b c d	20.	a b c d	28.	a b c d
5.	a b c d	13.	a b c d	21.	a b c d	29.	a b c d
6.	a b c d	14.	a b c d	22.	a b c d	30.	a b c d
7.	a b c d	15.	a b c d	23.	a b c d		
8.	a b c d	16.	a b c d	24.	a b c d		

Chapter

2

Whole Numbers

SECTION - A : MATHEMATICAL REASONING

1. Ekta and Chetna shared ₹91. For every ₹4 that Ekta received, Chetna received ₹9. How much money did Chetna receive?

a. ₹60 b. ₹61

c. ₹62 d. ₹63

2. Read the following statements carefully.

Statement 1: Ascending order means arrangement from the smallest to the greatest.

Statement 2: Ascending order means arrangement from the greatest to the smallest.

Statement 3: Descending order means arrangement from the greatest to the smallest.

Statement 4: Descending order means arrangement from the smallest to the greatest.

Which of the following is the correct option?

a. All statements are true.

b. All statements are false.

c. Only statements (1) and (3) are true.

d. Only statements (2) and (4) are true.

3. The number 5,00,428 in words is written as

a. Five crore four hundred thirty-eight.

b. Fifty lakh four hundred twenty-eight.

c. Five lakh four hundred twenty-eight.

d. Five lakh four hundred eight.

4. Which of the following is not a prime number?

a. 31 b. 61

c. 71 d. 91

5. $112 \times 5^4 =$

a. 67000 b. 70000

c. 76500 d. 77200

6. $935421 \times 625 =$

a. 575648125 b. 584638125

c. 584649125 d. 585628125

7. The largest 4-digit number exactly divisible by 88 is

a. 9944 b. 9768

c. 9988 d. 8888

8. Which of the following numbers is exactly divisible by 11?

a. 235641 b. 245642

c. 315624 d. 415624

9. Which of the following completes the given number sentence?

$\square$ – 19657 – 33994 = 9999

a. 63650 b. 53760

c. 59640 d. 61560

10. The difference between the place value and the face value of 7 in the numeral 32675149 is

a. 75142 b. 64851

c. 5149 d. 69993

11. Which of the following numbers is divisible by 24?

a. 35718 b. 63810
c. 537804 d. 3125736

12. How many natural numbers are there between 23 and 100, which are exactly divisible by 6?

a. 8 b. 11
c. 12 d. 13

13. The smallest number that should be added to 4456 so that the sum is completely divisible by 6 is

a. 4 b. 3
c. 2 d. 1

14. The least number that must be subtracted from 13601 so that the number is divisible by 87 is

a. 23 b. 31
c. 29 d. 37

15. The difference of two numbers is 1365. On dividing the larger number by the smaller number, we get 6 as the quotient and 15 as the remainder. The smaller number is

a. 240 b. 270
c. 295 d. 360

16. In a division sum, the divisor is 10 times the quotient and 5 times the remainder. If the remainder is 46, then the dividend is

a. 4236 b. 4306
c. 4336 d. 5336

17. The sum of the first 45 natural numbers is

a. 1035 b. 1280
c. 2070 d. 2140

18. 476 ** 0 is divisible by both 3 and 11. The non-zero digits in the hundreds and tens places are, respectively

a. 7 and 4 b. 7 and 5
c. 8 and 5 d. None of these

19. On dividing a number by 56, we get 29 as the remainder. On dividing the same number by 8, the remainder would be

a. 4 b. 5
c. 6 d. 7

20. How many of the following numbers are divisible by 3 but not by 9?
2133, 2343, 3474, 4131, 5286, 5340, 6336, 7347, 8115, 9276

a. 5 b. 6
c. 7 d. None of these

SECTION - B : EVERYDAY MATHS

21. In a tennis match, each player plays with every other player once only. If there are 5 players, then how many games will be played?

a. 6 b. 8
c. 10 d. 12

22. 95 oranges can be packed in one bag. How many bags will be required to pack 10165 oranges?

a. 107 b. 106
c. 105 d. 108

23. The number of science club members in a school is between 34 and 60. If the teacher groups them into a group of 6, there will be 2 pupils left. If they are put into groups of 8, there will be 4 pupils left. How many members are there in the club?

a. 40 b. 44
c. 48 d. 52

24. There were 10 questions in a mathematics quiz. Cindy answered all 10 questions and scored 29 points. If 5 points were awarded for each correct answer and 2 points were deducted for each incorrect answer, then how many questions did Cindy answered correctly?

a. 3 b. 5
c. 7 d. 9

25. There are 27 cars and motorcycles in a parking. If there are 84 wheels altogether, then how many cars are there?

a. 20 b. 15
c. 14 d. 16

SECTION - C : BRAINBOX

26. $1397 \times 1397 =$

a. 1951609 b. 1981709
c. 18362619 d. 2031719

27. It is being given that a number in the form of $(2^{32} + 1)$ is completely divisible by a whole number. Which of the following numbers is completely divisible by $2^{32} + 1$?

a. $(2^{16} + 1)$ b. $(2^{16} - 1)$
c. (7×2^{23}) d. $(2^{96} + 1)$

28. How many 3-digit numbers are completely divisible by 6?

a. 150 b. 149
c. 151 d. 166

29. The sum of first five prime numbers is

a. 11 b. 18
c. 26 d. 28

30. On dividing a number by 5, we get 3 as the remainder. What will be the remainder when the square of the given number is divided by 5?

a. 0 b. 1
c. 2 d. 4

Darken your choice with HB pencil

1.	a b c d	9.	a b c d	17.	a b c d	25.	a b c d
2.	a b c d	10.	a b c d	18.	a b c d	26.	a b c d
3.	a b c d	11.	a b c d	19.	a b c d	27.	a b c d
4.	a b c d	12.	a b c d	20.	a b c d	28.	a b c d
5.	a b c d	13.	a b c d	21.	a b c d	29.	a b c d
6.	a b c d	14.	a b c d	22.	a b c d	30.	a b c d
7.	a b c d	15.	a b c d	23.	a b c d		
8.	a b c d	16.	a b c d	24.	a b c d		

Chapter 3

Playing with Numbers

SECTION - A : MATHEMATICAL REASONING

1. The HCF of two prime numbers is

a. 2 b. 1
c. 0 d. 4

2. A number which has two factors only is called a/an

a. Composite number
b. Odd number
c. Even number
d. Prime number

3. The HCF of two numbers is 28 and their LCM is 336. If one number is 112, then the other number is

a. 64 b. 84
c. 34 d. 92

4. Which of the following numbers is not divisible by 2?

a. 54036 b. 50436
c. 34056 d. 65043

5. The least number which must be added to 6709 to make it exactly divisible by 9 is

a. 5 b. 4
c. 7 d. 2

6. The numbers 24984, 26784 and 28584 are divisible by

a. 3, 4 and 9
b. 3 and 4
c. 4 and 9
d. 3 and 9

7. What mathematical operation should replace '*' in the given equation?
2 * 6 – 12 ÷ 4 + 2 = 11

a. + b. –
c. × d. ÷

8. The value of 64 ÷ 8 ÷ 4 ÷ 2 is

a. 1 b. 8
c. 16 d. 24

9. What least value must be given to * so that the number 8*76246 is divisible by 11?

a. 0 b. 1
c. 3 d. 2

10. The value of (8 ÷ 88) × 8888088 is

a. 808008 b. 808080
c. 808088 d. 8008008

11. If three natural numbers are grouped together to form a triplet such that they are pair wise coprime, then which of the following set of numbers does not form a triplet?

a. (2, 3, 7) b. (2, 9, 11)
c. (3, 5, 7) d. (3, 4, 9)

12. Which of the following numbers has exactly four factors?

a. 16
b. 14
c. 18
d. None of these

13. The HCF of the denominator and the numerator of a fraction, which is in its lowest form, is

a. 1
b. 0
c. Always even number
d. None of these

14. Observe the following pattern.

$1 = 1 \times 1 = 1$

$1 + 3 = 2 \times 2 = 4$

$1 + 3 + 5 = 3 \times 3 = 9$

So, the sum of $1 + 3 + 5 + 7 + 9 + \ldots\ldots + 13$ is

a. 49 b. 121
c. 81 d. 100

15. The greatest number of four digits, which is exactly divisible by each of 16, 24, 35 and 42 is

a. 8462 b. 8400
c. 8692 d. None of these

16. The reciprocal of the smallest prime number is

a. 0 b. 1
c. $\frac{1}{2}$ d. 2

17. The two numbers which have only 1 as their common factor are said to be

a. coprimes
b. twin primes
c. composite numbers
d. even numbers

18. LCM of two numbers =

a. Product of two numbers + their HCF
b. Product of two numbers – their HCF
c. Product of two numbers ÷ their HCF
d. Product of two numbers × their HCF

19. If 5496a is divisible by 3, then which of the following can be the least value of a?

a. 0 b. 4
c. 5 d. None of these

20. The HCF of two consecutive odd numbers is

a. 2 b. 0
c. 1 d. 4

SECTION - B : EVERYDAY MATHS

21. Three sets of English, Mathematics and Science books containing 336, 240 and 96 books, respectively have to be stacked in such a way that all the books are stored subject wise and the height of each stack is the same. So, the total number of stacks will be

a. 14 b. 21
c. 22 d. 48

22. Riya, Dev and Punit begin to jog around a circular stadium. They complete their revolutions in 36 seconds, 48 seconds and 42 seconds, respectively. After how many seconds will they be together at the starting point?

a. 504 seconds b. 940 seconds
c. 1008 seconds d. 470 seconds

23. Three different containers contain different quantities of mixture of milk and water, whose measurements are 403 litres, 434 litres and 465 litres. What is the maximum capacity of a container that can measure the mixture of the three containers exactly?

a. 7 litres b. 1 litres
c. 31 litres d. 41 litres

24. The length and breadth of a room are 16.58 m and 8.32 m, respectively. The floor of room is to be paved with square tiles of uniform size of dimensions 2 cm × 2 cm. The maximum number of tiles which may cover the floor entirely is

a. 344560 b. 344864

c. 350000 d. 354000

25. A school bus can either accommodate 40 children or 30 adults. Given that there are already 24 children and 8 adults seated in the bus, how many more adults can be seated in the bus?

a. 5 b. 4

c. 3 d. 2

SECTION - C : BRAINBOX

26. The HCF of $\frac{6}{7}$, $\frac{24}{35}$ and $\frac{42}{49}$ is

a. $\frac{6}{254}$ b. $\frac{9}{365}$

c. $\frac{3}{254}$ d. $\frac{6}{245}$

27. The LCM of two numbers is 24 times their HCF. The sum of their HCF and LCM is 375. If one of the numbers is 45, then what is the other number?

a. 124 b. 120

b. 118 d. 121

28. If * means adding 6 times the second number to the first number, then (1*2) * 3 equals to

a. 121 b. 31

c. 93 d. 91

29. The value of [18 ÷ 6 + { 2 × (8 – 7 of 3) + 17 × 5 }] is

a. – 42

b. 62

c. 65

d. 85

30. Out of six consecutive numbers, the sum of first three numbers is 27. What is the sum of the next three numbers?

a. 30

b. 40

c. 36

d. 45

Darken your choice with HB pencil

1.	a b c d	9.	a b c d	17.	a b c d	25.	a b c d
2.	a b c d	10.	a b c d	18.	a b c d	26.	a b c d
3.	a b c d	11.	a b c d	19.	a b c d	27.	a b c d
4.	a b c d	12.	a b c d	20.	a b c d	28.	a b c d
5.	a b c d	13.	a b c d	21.	a b c d	29.	a b c d
6.	a b c d	14.	a b c d	22.	a b c d	30.	a b c d
7.	a b c d	15.	a b c d	23.	a b c d		
8.	a b c d	16.	a b c d	24.	a b c d		

Chapter

4

Basic Geometrical Ideas

SECTION - A : MATHEMATICAL REASONING

1. The basic elements of a quadrilateral are

a. 4 angles
b. 4 sides
c. 4 vertices
d. All of these

2. If the sum of two angles is greater than 180°, then which of the following is not possible?

a. The two angles are obtuse angles.
b. One of the angles is a reflex angle and the other is an acute angle.
c. The two angles are right angles.
d. None of these

3. A pair of lines which do not intersect at any point are called _____ lines.

a. perpendicular
b. parallel
c. concurrent
d. intersecting

4. Three or more lines are _____ , if they pass through a common point.

a. parallel
b. collinear
c. concurrent
d. all of these

5. The chord of a circle divides it into ____ parts.

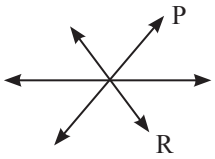
a. 3
b. 2
c. 4
d. 1

6. The region bounded by a chord and the major arc is called a

a. minor segment
b. major arc
c. major segment
d. semicircle

7. In the given figure, lines P, Q and R are called _____ lines.

a. intersecting
b. parallel
c. concurrent
d. transversal



8. The surface of a volleyball is

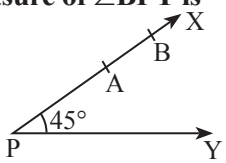
a. flat
b. triangular
c. curved
d. none of these

9. The number of line segments in the given figure is

a. 5
b. 11
c. 15
d. 20

10. In the given figure, if a point A is shifted to point B, along the ray PX such that PB = 2PA, then the measure of ∠BPY is

a. greater than 45°
b. 45°
c. less than 45°
d. 90°



11. The length of the boundary of a circle is called

a. an area
b. a volume
c. the circumference
d. the diameter

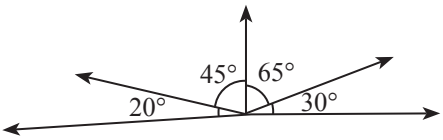
12. The cubical box has _____ edges.

a. 14
b. 8
c. 12
d. 16

13. **How many lines can pass through one point?**

a. One b. Two
c. More than two d. Infinite

14. **The number of obtuse angles in the given figure are**



a. 2 b. 3
c. 4 d. 5

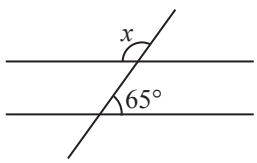
15. **Which of the following are open curves?**

(i)  **(ii)**  **(iii)**  **(iv)** 

a. (i) and (ii) b. (ii) and (iii)
c. (i) and (iii) d. None of these

16. **In the given figure, if the lines are parallel, then the value of *x* is**

a. 125°
b. 115°
c. 105°
d. none of these

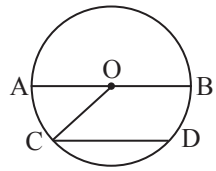


17. **A set of points which extends infinitely in both the directions is called a**

a. line b. point
c. plane d. line segment

18. **How many line segments are there in the given figure?**

a. 0
b. 4
c. 5
d. 2

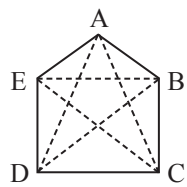


19. **The polygon which is made up of least number of sides is a**

a. triangle b. square
c. rectangle d. none of these

20. **How many diagonals are there in the given figure?**

a. 4
b. 7
c. 6
d. 5



SECTION - B : EVERYDAY MATHS

21. **The measure of two angles between the hours and the minutes hand of a clock, when the time is 9 o'clock, is**

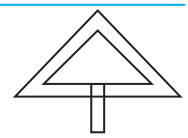
a. 60°, 300° b. 270°, 90°
c. 75°, 285° d. 30°, 330°

22. **If a bicycle has 24 stokes, then the angles between a pair of two consecutive spoke is**

a. 20° b. 15°
c. 13° d. None of these

23. **The given road sign is an equilateral triangle. What is the measure of its each angle?**

a. 45° b. 90°
c. 60° d. 36°



24. **A number of line segments are joined together to form a dice. How many such line segments are there?**

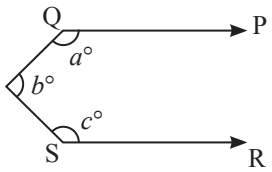
a. 15 b. 18
c. 12 d. 10

25. **Two poles of the same height stands upright. The distance between two poles is 10 m. What is the distance between their tops?**

a. 15 m b. 20 m
c. 10 m d. None of these

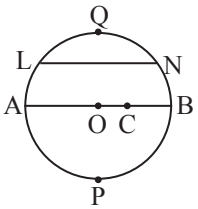
SECTION - C : BRAINBOX

26. If ray QP and SR are parallel to each other in the given figure, then the value of $a + b + c$ is



a. 180°
b. 90°
c. 360°
d. None of these

27. For the given circle, which of the following statements is incorrect?



a. LPN is the major segment of the circle.
b. AB is the diameter of the circle.
c. C is the centre of the circle.
d. AB divides circle into two equal parts.

28. If X, Y and Z are three points such that XY = 2YZ and XZ = 3YZ, then the three points are

a. not collinear.
b. collinear and X lies between Y and Z.
c. collinear and Y lies between X and Z.
d. collinear and Z lies between X and Y.

29. A and B are two points and C is any point collinear with A and B. If AB = 10, BC = 5, then AC is equal to

a. either 15 or 5.
b. necessarily 5.
c. necessarily 16.
d. none of these

30. Which of the following statements is true?

a. Every rectangle is a rhombus.
b. Every square is a rectangle.
c. Every rectangle is a square.
d. Every rhombus is a square.

Darken your choice with HB pencil

1.	a	b	c	d	9.	a	b	c	d	17.	a	b	c	d	25.	a	b	c	d
2.	a	b	c	d	10.	a	b	c	d	18.	a	b	c	d	26.	a	b	c	d
3.	a	b	c	d	11.	a	b	c	d	19.	a	b	c	d	27.	a	b	c	d
4.	a	b	c	d	12.	a	b	c	d	20.	a	b	c	d	28.	a	b	c	d
5.	a	b	c	d	13.	a	b	c	d	21.	a	b	c	d	29.	a	b	c	d
6.	a	b	c	d	14.	a	b	c	d	22.	a	b	c	d	30.	a	b	c	d
7.	a	b	c	d	15.	a	b	c	d	23.	a	b	c	d					
8.	a	b	c	d	16.	a	b	c	d	24.	a	b	c	d					

Chapter 5

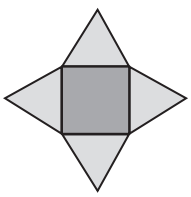
Understanding Elementary Shapes

SECTION - A : MATHEMATICAL REASONING

1. Which of the following shapes is a 3D shape?

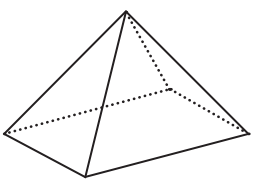
a. A circle b. A rectangle
c. A cube d. A square

2. Which of the following shapes would this net make?



a. Cylinder
b. Square pyramid
c. Square prism
d. Triangular pyramid

3. How many faces are there in the given figure?



a. 10 faces
b. 4 faces
c. 5 faces
d. 6 faces

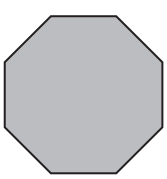
4. A parallelogram with four right angles and equal diagonals is called a

a. rectangle b. square
c. rhombus d. none of these

5. All sides of a parallelogram are equal.

a. True b. False
c. Cannot Say d. Question is incomplete

6. Which of the following correctly represents the given figure?



a. Hexagon
b. Octagon
c. Pentagon
d. None of these

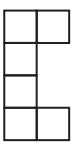
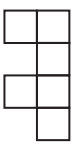
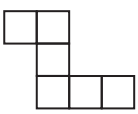
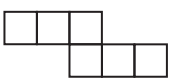
7. Which of the following shapes correctly represent a playing dice?

a. Cuboid b. Cube
c. Pyramid d. Prism

8. Which of the following 3D shapes look like a can of soup?

a. Cube
b. Cone
c. Cylinder
d. Sphere

9. Which of the following nets, when folded represents a cube?

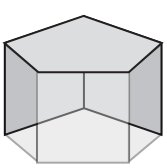
(A) 
(B) 
(C) 
(D) 

a. A b. B
c. C d. D

10. Which of the following 3D shapes has 5 faces?

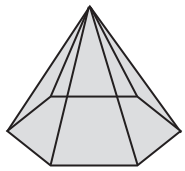
a. Sphere b. Triangular Prism
c. Rectangular Prism d. Cube

11. Which of the following shapes correctly represent the given figure?



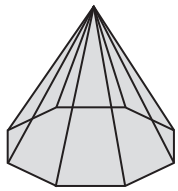
a. Pentagonal Pyramid
b. Pentagonal Prism
c. Hexagonal Pyramid
d. Hexagonal Prism

12. Which of the following shapes represent the given figure?



a. Hexagonal Prism
b. Hexagonal Pyramid
c. Heptagonal Pyramid
d. Heptagonal Prism

13. Which of the following shapes represent the given figure?



a. Octagonal Prism
b. Octagonal Pyramid
c. Hexagonal Prism
d. Hexagonal Pyramid

14. Which of the following shapes represent cross-section of the sphere?

a. Cone
b. Circle
c. Pyramid
d. Rectangle

15. Which of the following statements is true about a cone?

a. A figure with a circular top.
b. A figure with a pointed top and a circled bottom.
c. A figure with a square top.
d. Cannot say.

16. A parallelogram with four equal sides and four right angles is a

a. rhombus
b. trapezoid
c. square
d. rectangle

17. Which of the following solid figures have no face or corners?

a. Sphere
b. Cube
c. Cone
d. None of these

18. Which of the following is a 7-sided polygon?

a. Triangle
b. Heptagon
c. Hexagon
d. Octagon

19. Which of the following is a regular polygon?

a. Triangle
b. Heptagon
c. Acute Triangle
d. Regular Polygon

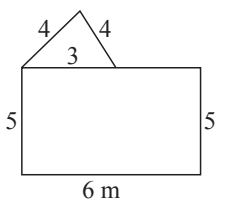
20. The number of edges in a cuboid is

a. 12
b. 17
c. 18
d. 20

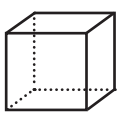
SECTION - B : EVERYDAY MATHS

21. What is the perimeter of the given figure?

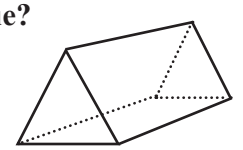
a. 27 m
b. 24 m
c. 30 m
d. 20 m



22. Compare the three-dimensional solids given below. Which of the following statements is true?



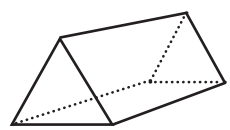
Cube



Triangular prism

a. The triangular prism has more edges than the cube.
b. The cube and the triangular prism have the same number of vertices.
c. The cube has more edges than the triangular prism.
d. None of these

23. How many faces does the given shape have?



a. 4
b. 5
c. 6
d. None of these

24. Which two of the given solids have the same number of faces?

A B C D

a. Solids B and C
b. Solids A and B
c. Solids A and D
d. All solids have the same number of faces.

25. A circle is divided into four equal pieces. If its three parts are painted in blue and a part is left empty, then how is it represented in a fraction form?

a. $\frac{1}{2}$ b. $\frac{3}{4}$
c. $\frac{1}{4}$ d. $\frac{2}{3}$

SECTION - C : BRAINBOX

26. I have hour corners and four equal sides. My each pair of opposite sides is parallel. I have two acute and two obtuse angles. Who am I?

a. Trapezoid b. Rhombus
c. Rectangle d. Parallelogram

27. A pyramid and a triangular prism are both named by the shape of their

a. sides b. bases
c. vertices d. polygons

28. Which of the following set of numbers are lengths of the sides of a triangle?

a. 4, 7, 12 b. 5, 8, 15
c. 5, 6, 7 d. 2, 2, 4

29. Which of the following shapes are the faces of a cube?

a. Circle b. Triangle
c. Square d. Pentagon

30. Which of the following properties are not true for a parallelogram?

a. The diagonals of a parallelogram are equal.
b. The diagonals of a parallelogram are perpendicular to each other.
c. The diagonals of a parallelogram divides it into four congruent triangles.
d. All of these

Darken your choice with HB pencil

1. (a) (b) (c) (d)	9. (a) (b) (c) (d)	17. (a) (b) (c) (d)	25. (a) (b) (c) (d)
2. (a) (b) (c) (d)	10. (a) (b) (c) (d)	18. (a) (b) (c) (d)	26. (a) (b) (c) (d)
3. (a) (b) (c) (d)	11. (a) (b) (c) (d)	19. (a) (b) (c) (d)	27. (a) (b) (c) (d)
4. (a) (b) (c) (d)	12. (a) (b) (c) (d)	20. (a) (b) (c) (d)	28. (a) (b) (c) (d)
5. (a) (b) (c) (d)	13. (a) (b) (c) (d)	21. (a) (b) (c) (d)	29. (a) (b) (c) (d)
6. (a) (b) (c) (d)	14. (a) (b) (c) (d)	22. (a) (b) (c) (d)	30. (a) (b) (c) (d)
7. (a) (b) (c) (d)	15. (a) (b) (c) (d)	23. (a) (b) (c) (d)	
8. (a) (b) (c) (d)	16. (a) (b) (c) (d)	24. (a) (b) (c) (d)	

Chapter

6

Integers

SECTION - A : MATHEMATICAL REASONING

1. There are three consecutive odd integers. If three times the odd integer is three more than twice the third integer, then the third odd integer is

a. 9 b. 11
c. 13 d. 15

2. The quotient, when 19 is divided by 6, is

a. 1 b. 2
c. 3 d. 0

3. The quotient and remainder when –3 is divided by 1 is

a. –1 and –1 b. –3 and 0
c. –1 and 2 d. 2 and 1

4. The number of factors of a prime numbers is

a. 2
b. 3
c. Depends on the prime number
d. None of these

5. If a, b, c and d are distinct prime numbers with 'a' as the smallest prime then a × b × c × d is a

a. odd number b. even number
c. prime number d. none of these

6. If a and b are two distinct prime numbers than the highest common factor of a and b is

a. 2 b. 0
c. 1 d. a and b both

7. If the product of two numbers is 12 and their LCM is 6 then their HCF is

a. 12 b. 2
c. 6 d. None of these

8. Suman says that if you subtract any two negative integers, then the difference is always negative. Is Suman's statement true?

a. Yes b. No
c. Either a and b d. None of these

9. Which of the following is correct?

a. $-34 < 0 < 4 < -16$
b. $-34 < -16 < 0 < 4$
c. $-16 < 0 < 4 < -34$
d. $-16 < -34 < 0 < 4$

10. The sum of –25, –10 , 16 and –12 is

a. 31 b. –31
c. 35 d. 18

11. On multiplying a negative integer for odd number of times, we get a _____ integer.

a. positive b. negative
c. 0 d. both a and b

12. The difference of two integers is –45. If one of them is 20, then the other one is

a. –25 or –65 b. 25 or –65
c. –25 or –65 d. None of these

13. Which of the following integers is the smallest?

a. –23 b. –54
c. –34 d. –2

14. Which property is reflected in the equation $7 \times 5 = 5 \times 7$?

a. Closure property
b. Commutative property
c. Associative property
d. Distributive property

15. On dividing a negative integer by the other negative integer, we always get _____ integer.

a. a negative
b. a positive
c. either positive or negative
d. one

16. Which of the following statements is true?

a. $7 - 4 = 4 - 7$
b. $7 - 4 > 4 - 7$
c. $7 - 4 < 4 - 7$
d. $7 - 4 = -3$

17. $1397 \times 1397 =$

a. 1951609
b. 1981709
c. 18362619
d. 2031719

18. -35×107 is not the same as

a. $-35 \times (100 + 7)$
b. $(-35) \times 7 + (-35) \times 100$
c. $-35 \times 7 + 100$
d. $(-30 - 5) \times 107$

19. Which of the following statements is not true?

a. When two positive integers are added, we always get a positive integer.
b. When two negative integers are added, we always get a negative integer.
c. When a positive integer and a negative integer is added, we always get a negative integer.
d. Additive inverse of an integer 2 is (–2) and additive inverse of (–2) is 2.

20. $(-43) \times (-99) + 43$ is equal to

a. 4300
b. –4300
c. 4257
d. –4214

SECTION - B : EVERYDAY MATHS

21. In a set of 12 questions, 4 marks are awarded for every correct answer and –1 marks are awarded for every wrong answer. Jia gets five correct and seven wrong answers. What is her score?

a. 20
b. 13
c. 12
d. 17

22. Lily bought four pair of jeans for ₹512. How much did she pay for a pair of jeans?

a. ₹36
b. ₹128
c. ₹8
d. None of these

23. Aaral's monthly salary is ₹12000. She spends ₹1450 for her education, ₹550 on her clothes, ₹450 on vegetables and milk, ₹1500 on her beauty items and pays a rent of ₹5000 in a particular month. How much does she save in that month?

a. ₹4255
b. ₹4960
c. ₹3165
d. ₹3050

24. Adhira has ₹200 in her savings account. She withdraws a cheque of ₹140, makes a deposit of ₹50 and then withdraws another cheque for ₹70. The amount left in her account is

a. ₹20
b. ₹40
c. ₹60
d. ₹30

25. Rahul drives his car at a speed of 44 km/h. He travels for 8 hours to reach Jaipur from Delhi. What is the distance that he has to travel in all if he has to return by the same route?

a. 704 km
b. 1352 m
c. 1550 km
d. 484 km

SECTION - C : BRAINBOX

26. Rohan deposits ₹5,000 in his bank account and withdraws ₹2845 from it, the next day. If withdrawal of amount from the account is represented by a negative integer, then how will you represent the amount deposited? Find the balance in Rohan's account after the withdrawal.

a. Negative integer, ₹2155
b. Positive integer, ₹2155
c. Negative integer, ₹2155
d. Positive integer, ₹2155

27. Water level in a well was 20 m below the ground level. During rainy season, rain water collected in different water tanks was drained into the well and the water level rises 5 m above the previous level. The wall of the well is 1 m 20 cm high and a pulley is fixed at a height of 80 cm. If Raghu wants to draw water from the well, then the minimum length of the rope that he can use is

a. 17 m
b. 18 m
c. 96 m
d. 97 m

28. The difference of two numbers is 1365. On dividing the larger number by the smaller number, we get 6 as its quotient and 15 as its remainder. Which is the smaller number?

a. 240
b. 270
c. 295
d. 360

29. The Mount Everest, the highest elevation in Asia, is 29,028 feet above sea level. The Dead Sea, the lowest elevation, is 1,312 feet below sea level. The difference of the two elevations is

a. 27716
b. 30340
c. –30340
d. None of these

30. A man has some hens and cows. If the number of heads is 48 and the number of feet is 140, then the number of cows is

a. 22
b. 23
c. 24
d. 26

Darken your choice with HB pencil

1.	a b c d	9.	a b c d	17.	a b c d	25.	a b c d
2.	a b c d	10.	a b c d	18.	a b c d	26.	a b c d
3.	a b c d	11.	a b c d	19.	a b c d	27.	a b c d
4.	a b c d	12.	a b c d	20.	a b c d	28.	a b c d
5.	a b c d	13.	a b c d	21.	a b c d	29.	a b c d
6.	a b c d	14.	a b c d	22.	a b c d	30.	a b c d
7.	a b c d	15.	a b c d	23.	a b c d		
8.	a b c d	16.	a b c d	24.	a b c d		

Chapter

7

Fractions

SECTION - A : MATHEMATICAL REASONING

1. The next equivalent fraction of the given fractions $\frac{1}{2}, \frac{2}{4}, \frac{3}{6}, \frac{4}{8}$, ... is

a. $\frac{7}{14}$ b. $\frac{6}{12}$

c. $\frac{15}{5}$ d. $\frac{5}{10}$

2. Which of the following pair of fractions are equivalent?

a. $\frac{5}{9}, \frac{30}{54}$ b. $\frac{3}{10}, \frac{12}{50}$

c. $\frac{7}{13}, \frac{5}{11}$ d. $\frac{8}{7}, \frac{16}{21}$

3. Which of the following numbers will replace the box such that the given fractions are equivalent?

$\frac{2}{7}, \frac{8}{\square}$

a. 16 b. 13

c. 28 d. 35

4. Shubham painted $\frac{2}{3}$ of the wall and his sister painted $\frac{1}{3}$ of the wall. How much did they paint altogether?

a. $\frac{2}{3}$ b. $\frac{1}{3}$

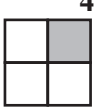
c. 1 d. $\frac{1}{2}$

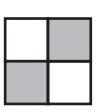
5. What fraction of a day is 10 hours?

a. $\frac{5}{12}$ b. $\frac{3}{10}$

c. $\frac{7}{12}$ d. $\frac{8}{10}$

6. Which of the following represents the fraction $\frac{3}{4}$?

a. 

b. 

c. 

d. 

7. Which of the following fractions is represented by the point P on the given number line?

a $\frac{1}{2}$ b $\frac{2}{1}$

c $\frac{2}{3}$ d $\frac{3}{2}$

8. $\frac{20}{3}$ can be written in mixed fraction as

a. $3\frac{1}{2}$ b. $6\frac{2}{3}$

c. $2\frac{5}{3}$ d. $5\frac{5}{3}$

9. $6\frac{5}{3}$ can be written in improper fraction as

a. $\frac{3}{20}$ b. $\frac{15}{3}$

c. $\frac{23}{3}$ d. $\frac{3}{15}$

10. Which of the following is a proper fraction?

a. $\frac{5}{6}$ b. $\frac{7}{3}$

c. $\frac{4}{3}$ d. $\frac{8}{5}$

11. Which of the following is an improper fraction?

a. $\frac{7}{8}$ b. $\frac{8}{3}$

c. $\frac{3}{4}$ d. $\frac{9}{11}$

12. A proper fraction with denominator 7 is

a. $\frac{8}{7}$ b. $\frac{4}{7}$

c. $\frac{9}{7}$ d. $\frac{11}{7}$

13. A improper fraction with denominator 9 is

a. $\frac{2}{9}$ b. $\frac{7}{9}$

c. $\frac{11}{9}$ d. $\frac{5}{9}$

14. Javed was given $\frac{5}{7}$ of a basket of oranges. What fraction of oranges was left in the basket?

a. $\frac{4}{7}$ b. $\frac{2}{7}$

c. $\frac{5}{7}$ d. $\frac{12}{7}$

15. The value of $3\frac{1}{5} - 1\frac{2}{3}$ is

a. 9 b. $\frac{9}{1}$

c. $\frac{23}{15}$ d. $\frac{9}{5}$

16. The perimeter of a square board is $\frac{4}{5}$ m. What is the length of its each side?

a. $\frac{1}{5}$ b. $\frac{16}{5}$

c. $\frac{20}{4}$ d. $\frac{5}{20}$

17. The value of $1\frac{1}{3} + 3\frac{2}{3}$ is

a. $\frac{10}{3}$ b. $\frac{6}{3}$

c. $\frac{15}{3}$ d. $\frac{15}{6}$

18. Which of the following fractions will replace the given box? $\frac{7}{10} + \square = \frac{3}{10}$

a. $\frac{2}{5}$ b. $\frac{-4}{10}$

c. $\frac{1}{4}$ d. $\frac{5}{2}$

19. Which of the following fractions is represented by the point Q on the given number line?

a. $\frac{13}{5}$ b. $\frac{3}{5}$

c. $\frac{3}{13}$ d. $\frac{13}{3}$

20. The simplest form of $\frac{48}{60}$ is

a. $\frac{5}{4}$ b. $\frac{4}{5}$

c. $\frac{8}{10}$ d. $\frac{12}{15}$

SECTION - B : EVERYDAY MATHS

21. $\frac{4}{5}$ of 5 kg apples were used on Monday. The next day $\frac{1}{3}$ of what was left was used. The weight of apples left is

a. $\frac{2}{7}$ kg b. $\frac{1}{14}$ kg

c. $\frac{2}{3}$ kg d. $\frac{4}{21}$ kg

22. Aman, Aditya and Ankur have divided a cake into 4 equal parts. They take 1 piece each. What part of cake is left?

a. $\frac{1}{4}$ b. $\frac{1}{2}$

c. $\frac{3}{4}$ d. $\frac{1}{6}$

23. A bowler took 20 wickets for 642 runs. His average score per wicket is

a. 21.4 runs/wicket

b. 12.3 runs/wickets

c. 32.1 runs/wicket

d. 22 runs/wickets

24. Chitra had a plot of land. She planted flowering plants on $\frac{3}{4}$ of the land. If $\frac{2}{3}$ of the flowering plants were sun flowers, then what fraction of the land was planted with sunflowers?

a. $\frac{1}{3}$ b. $\frac{1}{2}$

c. $\frac{5}{7}$ d. $\frac{7}{5}$

25. In a refrigerator, there were $\frac{2}{7}$ as many vanilla cones as chocolate cones. The number of mango cones was $\frac{2}{5}$ of the number of vanilla cones. If there were 72 mango cones, then how many cones were there in the refrigerator altogether?

a. 242 b. 442

c. 882 d. 1082

SECTION - C : BRAINBOX

26. Aaral and Adira have ₹41 altogether, $\frac{1}{4}$ of Aaral's money is ₹2 more than $\frac{1}{7}$ of Adira's money. How much does Aaral have?

a. ₹20 b. ₹29

c. ₹30.50 d. ₹27.5

27. Charmi studies for $5\frac{5}{6}$ hours daily. She devotes $4\frac{3}{6}$ hours for studying English and science. How much time does she devote for other subjects?

a. $2\frac{2}{6}$ hrs b. $\frac{2}{4}$ hrs

c. 2 hrs d. $\frac{4}{3}$ hrs

28. A farmer has 100 animals out of which $\frac{5}{10}$ are cattle and $\frac{3}{6}$ of cattle are dairy cows. How many dairy cows does he have?

a. 55 b. 32

c. 75 d. 25

29. The total number of members in group A and group B is 75. The total number of members in group B and group C is 51. The number of members in group C is $\frac{2}{5}$ as many as that in group A. How many pupils are there in group B?

a. 28 b. 35

c. 42 d. 49

30. Maan and Mukund have ₹196 altogether. $\frac{1}{3}$ of Maan's money is ₹4 more than $\frac{1}{5}$ of Mukund's money. How much money does Maan have?

a. ₹61 b. ₹41

c. ₹81 d. ₹31

Darken your choice with HB pencil

1.	(a) (b) (c) (d)	9.	(a) (b) (c) (d)	17.	(a) (b) (c) (d)	25.	(a) (b) (c) (d)
2.	(a) (b) (c) (d)	10.	(a) (b) (c) (d)	18.	(a) (b) (c) (d)	26.	(a) (b) (c) (d)
3.	(a) (b) (c) (d)	11.	(a) (b) (c) (d)	19.	(a) (b) (c) (d)	27.	(a) (b) (c) (d)
4.	(a) (b) (c) (d)	12.	(a) (b) (c) (d)	20.	(a) (b) (c) (d)	28.	(a) (b) (c) (d)
5.	(a) (b) (c) (d)	13.	(a) (b) (c) (d)	21.	(a) (b) (c) (d)	29.	(a) (b) (c) (d)
6.	(a) (b) (c) (d)	14.	(a) (b) (c) (d)	22.	(a) (b) (c) (d)	30.	(a) (b) (c) (d)
7.	(a) (b) (c) (d)	15.	(a) (b) (c) (d)	23.	(a) (b) (c) (d)		
8.	(a) (b) (c) (d)	16.	(a) (b) (c) (d)	24.	(a) (b) (c) (d)		

Chapter

8

Decimals

SECTION - A : MATHEMATICAL REASONING

1. What decimal of an hour is a second?

a. 0.0025 b. 0.025677

c. 0.0002777 d. 0.000126

2. If 2197 ÷ 1.3 = 16.9, then 21.97 ÷ 0.13 =

a. 174 b. 189

c. 168.5 d. 169

3. $\frac{0.009}{x} = 0.01$

The value of *x* is

a. 0.0009 b. 0.09

c. 0.9 d. 9

4. 53.889 + 16.952 – ? = 68.854

What is the missing number?

a. 1.987 b. 1.989

c. 2.011 d. 1.997

5. 617 + 6.017 + 0.617 + 6.0017 =

a. 6.2963 b. 62.965

c. 629.6357 d. None of these

6. 0.002 × 0.5 =

a. 0.0001 b. 0.001

c. 0.01 d. 0.1

7. The least among the following is

a. 0.676 b. 1 ÷ 0.5

c. 0.1 d. 0.1 × 0.2

8. $\frac{5 \times 1.6 - 2 \times 1.4}{1.3} =$

a. 0.4 b. 1.2

c. 1.4 d. 4

9. $\frac{0.0203 \times 2.92}{0.0073 \times 14.5 \times 0.7} =$

a. 0.8 b. 1.45

c. 2.40 d. 3.25

10. The value of *x* in the given expression is

832.58 – 242.31 = 779.84 – *x*

a. 99.57 b. 179.57

c. 295.05 d. 189.57

11. The decimal form of $\frac{47}{20}$ **is**

a. 3.25 b. 4.15

c. 4.25 d. 2.35

12 What is the missing number?

0.525 × 100 = ? ÷ 10

a. 5.25 b. 52.5

c. 525 d. 5250

13. Which of the following decimals is the largest?

a. 2.010 b. 2.5

c. 2.090 d. 2.559

14. 70 tens and 52 hundredths 8 thousandths can be written as

a. 700.852 b. 0.7528

c. 700.258 d. 700.528

15. Which of the following is smallest?

a. 0.8125 b. 0.7895

c. 0.8095 d. 0.875

16. **The standard form of the decimal number 0.99872443 is**

a. 9.9872443×10^{-1}

b. 9.9872443×10^{-7}

c. 9.9872443×10^{-2}

d. 9.9872443×10^{0}

17. **Which decimal number represents seven hundred ninety-two and five hundredths?**

a. 792.500 b. 792.05

c. 792.005 d. 792,500

18. **Which number represents six and eighty-four thousandths in standard form?**

a. $(6 \times 1) + \left(8 \times \frac{1}{100}\right) + \left(4 \times \frac{1}{1000}\right)$

b. 6.84

c. $(6 \times 1) + \left(8 \times \frac{1}{10}\right) + \left(4 \times \frac{1}{100}\right)$

d. 6.084

19. **Which of the following is the correct expanded form of 3.704?**

a. Three and seven hundred four thousandths

b. $3 + 7 + 4$

c. $3 + 0.7 + 0.04$

d. $3 + \frac{7}{10} + \frac{4}{1000}$

20. **Which of the following represents fifty-four thousand one hundred seventy-nine and four hundredths?**

a. 54,179.04 b. 54,179.4

c. 54,079.04 d. 54,179.004

SECTION - B : EVERYDAY MATHS

21. **In the first year, Paige was 4.62 cm tall. In the second year, she grew 7.7 cm tall. How tall was she altogether?**

a. 12.3 cm

b. 3.8 cm

c. 12.32 cm

d. 12.32 cm

22. **If speed of a car is 50.4 km/h, then the distance covered by the car in 3.7 hours is**

a. 186.48 km

b. 18.648 km

c. 1864.8 km

d. 186.84 km

23. **A sum of ₹242.46 is to distributed equally among 6 children. What is the share of each child?**

a. ₹40.41 b. ₹50.12

c. ₹4.041 d. ₹404.1

24. **An ice cream seller has 8.4 litre ice cream. If one cone contains 35 mL of ice cream, then the number of cones filled with ice cream is**

a. 248

b. 240

c. 340

d. 385

25. **Oliver bought 7 bags of candy. Each bag costs ₹1.50. How much money did he have to pay in all?**

a. ₹7.50

b. ₹8.50

c. ₹10.50

d. ₹105.00

SECTION - C : BRAINBOX

26. Which of the following completes the given pattern.

7000, 700, 70, 7, 0.7, ___ , ___.

a. 0.007, 0.0007

b. 0.07, 0.007

c. 7, 0.7

d. 0.7, 0.71

27. My dog Ellie weighs 57.094. My other dog Spencer weighs 57.940. Which dog weighs more? How can you tell?

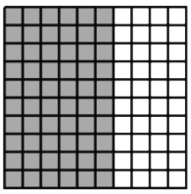
a. Ellie weighs more. I looked in the hundredths place and 0 is more than 9.

b. Spencer weighs more. I looked in the tenths place and the numbers are both zero.

c. Ellie weighs more. I can just tell.

d. Spencer weighs more. I looked in the tenths place and 9 is larger than zero.

28. Which of the following decimal numbers is illustrated in the given image?



a. 0.40

b. 0.20

c. 0.60

d. 1.20

29. Which of the following numbers falls between 4.5 and 4.6?

a. 4.05

b. 4.61

c. 4.58

d. 4.50

30. Which symbol correctly completes the given number sentence?

0.632 ____ 0.609

a. > b. <

c. = d. ?

Darken your choice with HB pencil

1.	a	b	c	d	9.	a	b	c	d	17.	a	b	c	d	25.	a	b	c	d
2.	a	b	c	d	10.	a	b	c	d	18.	a	b	c	d	26.	a	b	c	d
3.	a	b	c	d	11.	a	b	c	d	19.	a	b	c	d	27.	a	b	c	d
4.	a	b	c	d	12.	a	b	c	d	20.	a	b	c	d	28.	a	b	c	d
5.	a	b	c	d	13.	a	b	c	d	21.	a	b	c	d	29.	a	b	c	d
6.	a	b	c	d	14.	a	b	c	d	22.	a	b	c	d	30.	a	b	c	d
7.	a	b	c	d	15.	a	b	c	d	23.	a	b	c	d					
8.	a	b	c	d	16.	a	b	c	d	24.	a	b	c	d					

Chapter
9

Data Handling

SECTION - A : MATHEMATICAL REASONING

The frequency distribution of daily income of 550 workers of a factory is given below.

	Class intervals (daily income in ₹)	Frequency (number of workers)
I	100 - 125	45
II	125 - 150	25
III	150 - 175	55
IV	175 - 200	125
V	200 - 225	140
VI	225 - 250	55
VII	250 - 275	35
VIII	275 - 300	50
IX	300 - 325	20
	Total	**550**

Answer the following questions.

1. What is the size of class intervals?

a. 24 b. 25
c. 26 d. 15

2. Which class has the highest frequency?

a. 200 - 225 b. 300 - 325
c. 175 - 200 d. 150 - 175

3. Which class has the lowest frequency?

a. 100 - 125
b. 300 - 325
c. 175 - 200
d. 150 - 175

4. What is the upper limit of the class interval 250 - 275?

a. 250
b. 275
c. 25
d. 525

5. Which two classes have the same frequency?

a. III and VI
b. I and II
c. II and V
d. V and VI

The table given below shows the number of bicycles manufactured in a factory during the year 1998 to 2002. Read the table and answer the questions given below.

Years	No. of bicycles manufactured
1998	800
1999	600
2000	900
2001	1100
2002	1200

6. In which year were the maximum number of bicycles manufactured?

a. 2002 b. 2001
c. 2000 d. 1999

7. In which year were the minimum number of bicycles manufactured?

a. 2002 b. 1999
c. 2000 d. 1998

8. How many bicycles were manufactured from 1998 to 2002?

a. 4600 b. 4000
c. 2400 d. 2800

9. What is the difference between the number of bicycles manufactured in 2002 and 1999?

a. 600 b. 1200
c. 500 d. 1800

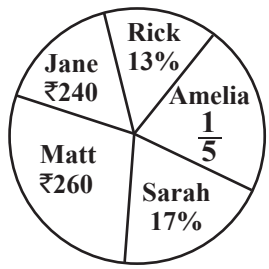
10. In a bar graph, bars are made _____.

a. horizontally
b. vertically
c. sometimes horizontally sometimes vertically
d. obliquely

11. The representation of data in the form of pictures is called a _____.

a. bar graph
b. pictograph
c. histogram
d. none of these

Madam Yong received ₹1000 from her 5 children monthly as shown in the pie chart given below. Study the given pie chart and answer the following questions.



12. How much money did Rick and Amelia gave altogether?

a. ₹230 b. ₹330
c. ₹130 d. ₹200

13. How much more money was given by Sarah than Rick?

a. ₹70 b. ₹60
c. ₹50 d. ₹40

14. What percentage of the sum of money was given by Matt?

a. 30 % b. 30 %
c. 28 % d. 26 %

15. The ratio of Amelia's contribution to Jane's contribution is

a. 5 : 7 b. 5 : 6
c. 5 : 8 d. 5 : 9

16. The contribution of Amelia in per cent is

a. 10 % b. 19 %
c. 20 % d. 40 %

Numbers 1 to 10 are written on ten separate slips (one number on one slip), kept in a box and mixed well. One slip is chosen from the box without looking into it. Answer the following questions.

17. What is the probability of getting a number 6?

a. 1

b. 0

c. $\frac{1}{10}$

d. $\frac{1}{2}$

18. What is the probability of getting a number less than 6?

a. 1

b. 0

c. $\frac{1}{10}$

d. $\frac{1}{2}$

19. What is the probability of getting a number greater than 6?

a. 1

b. 0

c. $\frac{1}{10}$

d. $\frac{2}{5}$

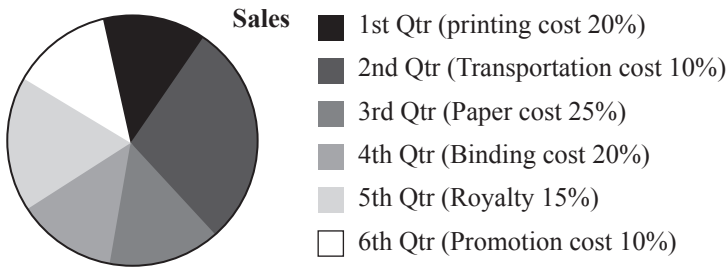
20. What is the probability of getting a 1-digit number?

a. 1 b. 0

c. $\frac{1}{10}$ d. $\frac{9}{10}$

SECTION - B : EVERYDAY MATHS

The following pie chart shows the percentage distribution of the expenditure incurred in publishing a book. Study the pie chart and answer the questions given below based on it.



Various Expenditures (in percentage) Incurred in Publishing a Book

21. If for a certain quantity of books, the publisher has to pay ₹30,600 as printing cost, then what will be the amount of royalty to be paid for these books?

a. ₹19,450 b. ₹21,200

c. ₹22,950 d. ₹26,150

22. What is the central angle of the sector corresponding to the expenditure incurred on Royalty?

a. 15° b. 24°

c. 54° d. 48°

23. The price of the book is marked 20% above the C.P. If the marked price of the book is ₹180, then what is the cost of the paper used in a single copy of the book?

a. ₹36 b. ₹37.50

c. ₹42 d. ₹44.25

24. If 5500 copies are published and the transportation cost on them amounts to ₹82,500, then what should be the selling price of the book so that the publisher can earn a profit of 25%?

a. ₹202.50 b. ₹191.50

c. ₹187.50 d. ₹180

25. The royalty on the book is less than the printing cost by

a. 5%

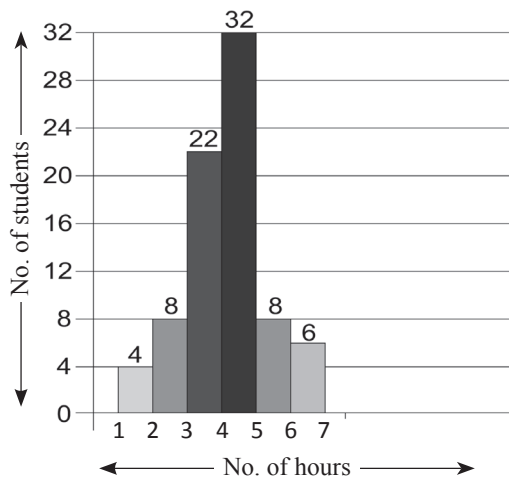
b. $33\frac{1}{5}\%$

c. 20%

d. 25%

SECTION - C : BRAINBOX

The number of hours for which students of a particular class watched television during holidays is shown through the graph given below.



Look at the graph given above and answer the following questions.

26. For how many hours did the maximum number of students watch television?

a. 4-5 hrs b. 6-7 hrs

c. 3-4 hrs d. 2-3 hrs

27. How many students watched television for less than 4 hrs?

a. 12 b. 34

c. 4 d. 8

28. How many students spent more than 5 hrs in watching television?

a. 14 b. 0

c. 6 d. 8

29. For how many hours did the minimum number of students watch television?

a. 2-3 hrs b. 6-7 hrs

c. 1-2 hrs d. 3-4 hrs

30. How many students spent less than 5 hours in watching television?

a. 34 b. 32

c. 8 d. 66

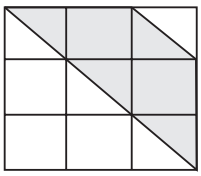
Darken your choice with HB pencil

1.	a	b	c	d	9.	a	b	c	d	17.	a	b	c	d	25.	a	b	c	d
2.	a	b	c	d	10.	a	b	c	d	18.	a	b	c	d	26.	a	b	c	d
3.	a	b	c	d	11.	a	b	c	d	19.	a	b	c	d	27.	a	b	c	d
4.	a	b	c	d	12.	a	b	c	d	20.	a	b	c	d	28.	a	b	c	d
5.	a	b	c	d	13.	a	b	c	d	21.	a	b	c	d	29.	a	b	c	d
6.	a	b	c	d	14.	a	b	c	d	22.	a	b	c	d	30.	a	b	c	d
7.	a	b	c	d	15.	a	b	c	d	23.	a	b	c	d					
8.	a	b	c	d	16.	a	b	c	d	24.	a	b	c	d					

Chapter
10 Perimeter and Area

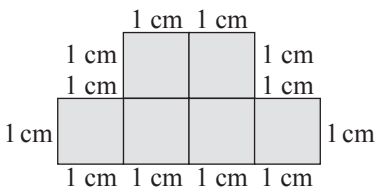
SECTION - A : MATHEMATICAL REASONING

1. The area of each small square is 1 sq. cm. The area of the shaded part is



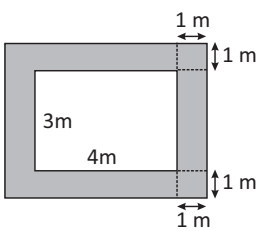
a. 4 cm^2
b. 1 cm^2
c. 10 cm^2
d. 2 cm

2. The figure is made up of squares of side 1 cm. The perimeter of the figure is



a. 12 cm
b. 14 cm
c. 10 cm
d. 122 cm

3. The area of the shaded portion is



a. 18 cm^2
b. 8 cm^2
c. 20 cm^2
d. 10 cm^2

4. A circle has a circumference of 54 cm. What is its radius? ($\pi = 3.142$)

a. 8.59 cm
b. 4.59 cm
c. 12 cm
d. 18 cm

5. The area of a circle is 528 cm^2. Its circumference is

a. 81.46 cm
b. 42.27 cm
c. 1387 cm
d. 18 cm

6. The length of a rectangle is twice its breadth. If the length is 14 cm, then the area of the rectangle is

a. 212 cm^2
b. 200 cm^2
c. 300 cm^2
d. None of these

7. Venu jogged around rectangular field four times. If the rectangular field was 135 m long and 78 m wide, then how far did Venu jogged?

a. 426 m
b. 852 m
c. 1278 m
d. 1704 m

8. The breadth of a rectangle is 19 cm. Its length is 3 times longer than its breadth. The area of the rectangle is

a. 152 cm^2
b. 418 cm^2
c. 1083 cm^2
d. 1140 cm^2

9. What is the distance around a rectangular pond if the area of the pond is 80 m^2 and its breadth is 5 m?

a. 16 m
b. 32 m
c. 42 m
d. 75 m

10. Krishna made a drawing of his rectangular kitchen for art class. The length of the drawing was 8 cm and the width of the drawing was 2 cm less than the length. The perimeter of the drawing is

a. 8.2 cm b. 0.28 m
c. 28 cm d. 2.8 cm

11. The sum of the areas of the two rectangles with dimensions 10 cm × 5 cm is bigger than the area of the square of side 9 cm by _____ cm^2.

a. 1.9
b. 5
c. 36
d. None of these

12. A wire was 54 cm long. It is bent into a rectangle. What is the length and breadth of the rectangle if its length is twice its breadth?

a. L = 18 cm, b = 9 cm
b. L = 18 cm, b = 18 cm
c. L = 9 cm, b = 18 cm
d. None of these

13. The difference between the length and breadth of a rectangle is 23 m. If its perimeter is 206 m, then its area is

a. 1520 m^2
b. 2420 m^2
c. 2480 m^2
d. 2520 m^2

14. The length of a rectangle is halved, while its breadth is tripled. What is the percentage change in area?

a. 25% increase
b. 50% increase
c. 50% decrease
d. 75% decrease

15. The length of a rectangular plot is 20 metres more than its breadth. If the cost of fencing the plot at ₹26.50 per metre is ₹5300, then what is the length of the plot in metres?

a. 40 b. 50
c. 120 d. 60

16. A rectangular field is to be fenced on three sides leaving a side of 20 m uncovered. If the area of the field is 680 sq. m, how many metres of fencing will be required?

a. 34 m b. 40 m
c. 68 m d. 88 m

17. A tank is 25 m long, 12 m wide and 6 m deep. The cost of plastering its walls and bottom at 75 paise per sq. m is

a. ₹456 b. ₹458
c. ₹558 d. ₹568

18. An error 2% in excess is made while measuring the side of a square. The percentage of error in the calculated area of the square is

a. 2 % b. 2.02 %
c. 4 % d. 4.04 %

19. The ratio between the perimeter and the breadth of a rectangle is 5 : 1. If the area of the rectangle is 216 sq. cm, then what is the length of the rectangle?

a. 16 cm b. 18 cm
c. 24 cm d. Data inadequate

20. The percentage increase in the area of a rectangle, if each of its sides is increased by 20% is

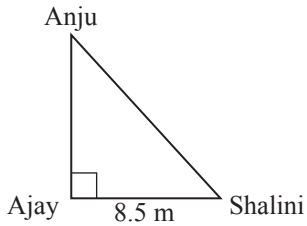
a. 40 % b. 42 %
c. 44 % d. 46 %

21. Rakesh runs on a track outside a circular grass lawn which has a radius of 63 m and is 14 m wide. What is the area of the running track?

a. 6160 m^2
b. 6660 m^2
c. 7160 m^2
d. 7666 m^2

22. Ajay, Anju and Shalini are standing in a playground, holding a rope as given in the figure. If the area released by them is 85.85 m^2, then the distance between Anju and Ajay is

a. 20.20 m
b. 10.10 m
c. 30.30 m
d. 14.14 m



23. Jogi buys a rectangular land of area 1224 m^2. Instead of fencing the land he decides to plant coconut trees, each tree being two metres apart along the border of the land. The number of trees Jogi can plant if the length of the plot is 36 m, is

a. 70
b. 72
c. 71
d. 173

Directions (Q24 and Q25). In each of the questions given below, a question and two statements numbered I and II are given. Decide whether the data previded in the statements are sufficient to answer the question or not and choose the correct option.

24. What will be the cost of painting the inner walls of a room if the rate of painting is ₹20 per square m?

I. The circumference of the floor is 44 m.

II. The height of the wall of the room is 12 m.

a. I alone sufficient while II alone not sufficient to answer.
b. II alone sufficient while I alone not sufficient to answer.
c. Either I or II alone sufficient to answer.
d. Both I and II are necessary to answer.

25. The area of playground is 1600 m^2. What is its perimeter?

I. It is a perfect square playground.

II. It costs ₹3200 to put a fence around the playground at the rate of ₹20 per metre.

a. Either I or II alone sufficient to answer.
b. II alone sufficient while I alone not sufficient to answer.
c. I alone sufficient while II alone not sufficient to answer.
d. Both I and II are not sufficient to answer.

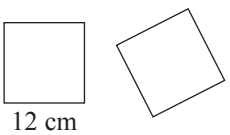
SECTION - C : BRAIN BOX

26. In a rectangular garden, 80 students of the same height stand with both hands stretched all along the sides of the garden. If each student covers a length of 1.75 m, then the perimeter of the garden is

a. 1400 m b. 14000 cm
c. 14 m d. None of these

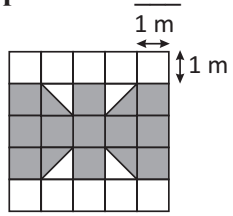
27. What is the area of the two identical squares shown below?

a. 288 cm^2
b. 64 cm^2
c. 135 cm^2
d. None of these



28. The area of the shaded portion is ___ m^2.

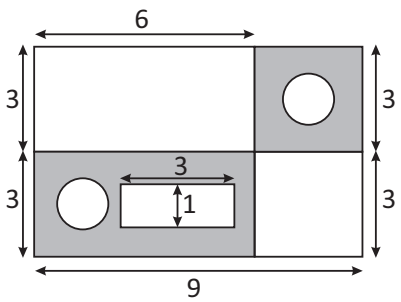
a. 9
b. 12
c. 13
d. 18



29. Shyam ran four times around a rectangular field. If the rectangular field is 48 m long and 40 m wide, then how far did he run?

a. 407 m
b. 704 m
c. 700 m
d. None of these

30. The area of the shaded portion, if the sum of the areas of the circles is $2\frac{1}{2}$ cm^2, is (dimensions are in cm)



a. 212 cm^2 b. 312 cm^2
c. 21.5 cm^2 d. None of these

Darken your choice with HB pencil

1.	a b c d	9.	a b c d	17.	a b c d	25.	a b c d
2.	a b c d	10.	a b c d	18.	a b c d	26.	a b c d
3.	a b c d	11.	a b c d	19.	a b c d	27.	a b c d
4.	a b c d	12.	a b c d	20.	a b c d	28.	a b c d
5.	a b c d	13.	a b c d	21.	a b c d	29.	a b c d
6.	a b c d	14.	a b c d	22.	a b c d	30.	a b c d
7.	a b c d	15.	a b c d	23.	a b c d		
8.	a b c d	16.	a b c d	24.	a b c d		

Chapter 11

Algebra

SECTION - A : MATHEMATICAL REASONING

1. Beena and Sheena saved a total of ₹p. Sheena saved ₹5 more than Beena. How much did Beena save in terms of p?

a. ₹$\left(\frac{p-5}{2}\right)$ b. ₹$\left(\frac{p}{2}-5\right)$

c. ₹$\left(p-\frac{5}{2}\right)$ d. ₹$\left(\frac{p+5}{2}\right)$

2. The average of seven numbers is 49y. If 1 is added to the first number, 2 is added to the second number, 3 is added to the third number and so on up to the seventh number, what is the new average? Give your answer in terms of y.

a. $53y$ b. $53y + 1$

c. $7y + 13$ d. $49y + 4$

3. A cap costs n rupees and a belt costs ₹90 more than a cap. Mohan wants to buy a belt and 2 caps but is short of ₹70. How much money does Mohan have? Express your answer in terms of n rupees.

a. $3n$ b. $3n + 20$

c. $2n + 70$ d. $n + 70$

4. What is the sum of the expression $3k - 8 + 2k - 1$ in terms of k?

a. $5k - 10$ b. $5k - 9$

c. $5k + 9$ d. $5k + 10$

5. The value of the expression $18b - 7b - 26$, when $b = 8$, is

a. 62 b. 64

c. 66 d. 68

6. The sum of three consecutive numbers is 6u. The smallest number is

a. $2u - 1$ b. $2u$

c. $2u + 1$ d. $2u + 2$

7. A teacher distributed 15 pencils per student. How many pencils are needed for y students?

a. $15 - y$ b. $15 + y$

c. $\frac{15}{y}$ d. $15y$

8. The statement for the expression $2y - 9$ is

a. Nine subtracted from 2 multiplied by y.

b. Nine subtracted from y and multiplied by 2.

c. Nine subtracted from 2.

d. Nine minus twice of y.

9. The expression for 5 times y to which 3 is added is

a. $y + 15$ b. $5y + 3$

c. $+3$ d. $3y + 5$

10. Which of the following is an equation?

a. $2x + 3 + 5$ b. $2x + 3 < 5$

c. $2x + 3 > 5$ d. $2x + 3 = 5$

11. Which of the following is a solution of the equation $3x + 2 = 11$?

a. 0 b. 11

c 3 d. 27

12. $a \times (b + c) = a \times b + a \times c$ is the general form of

a. commutative property under addition.

b. associative property under multiplication.

c. distributive property of multiplication over addition.

d. closure property.

13 Sarita's present age is *m* years. What will be her age after ten years?

a. $10m$ b. $m - 10$

c. $10 - m$ d. $m + 10$

14. The price of potatoes is ₹*x* per kg and the price of onion is ₹10 more than the price of potatoes. Therefore, the price of onion is

a. ₹$10x$ per kg b. ₹$(x + 10)$ per kg

c. ₹$\frac{x}{10}$ d. ₹$(x - 10)$ per kg

15. The value of the variable in the expression is

a. fixed b. not fixed

c. zero d. one

16. The power of a variable in a linear equation is

a. zero b. one

c. two d. three

17. The expression for "the quotient of *x* and *a* subtracted from the quotient of *y* and *b*" is

a. $\frac{y}{b} - \frac{x}{a}$ b. $\frac{y - x}{a - b}$

c. $xa - yb$ d. $\frac{1}{yb - xa}$

18. Jaya's score in Mathematics is 30 more than two-third of her score in English. If her score in English is *x*, then her score in Mathematics is

a. $\frac{2}{3}(x + 30)$ b. $\frac{2x}{3} + 30$

c. $\frac{2x}{3} - 30$ d. $30 - \frac{2x}{3}$

19. The average mass of seven watermelons is *w* kg. If the total mass of three watermelons is 8 kg, then what is the average mass of the remaining watermelons in term of *w*?

a. $\frac{7w + 8}{4}$ kg b. $\frac{7w - 8}{4}$ kg

c. $\frac{8w + 7}{4}$ kg d. $\frac{8w - 7}{4}$ kg

20. Rehan has ₹$(50 + 8s)$. Samad had ₹$9s$ more than Rehan. Rehan was given *s* and Samad was given twice as much. How much do they now have altogether?

a. ₹$(90 + 28s)$ b. ₹$(100 + 28s)$

c. ₹$(110 + 28s)$ d. ₹$(100 + 38s)$

SECTION - B : EVERYDAY MATHS

21. For a school project, Meera had to cut some identical circles of radius 2 cm from a rectangular sheet of paper measuring 60 cm by *h* cm. The maximum number of circles she could cut in terms of *h* is

a. $4.77h$ b. $3.15h$

c. $15h$ d. $12h$

22. Sheenu had $(18y + 10)$ metres of cloth. She made 2 identical dresses using $5y$ metres each. How much cloth did Sheenu have left?

a. $8y$ metres

b. $(8y + 10)$ metres

c. $(13y + 5)$ metres

d. $(y + 18)$ metres

23. Five years ago, Priya was *y* years old. Her brother is 3 years younger than her now. What is their total age now?

a. $(2y + 7)$ years b. $(y + 7)$ years

c. $(2y + 3)$ years d. $(3y + 5)$ years

24. Hima paid ₹6.60 for 6 erasers and some sharpeners. Each eraser cost *y* paise and each sharpener cost $(y - 50)$ paise. If $y = 90$, how many sharpeners did

Hima buy?

a. 3 b. 4

c. 5 d. 6

25. Ravi and Harish took 1 hour to clean the fish tank together. If Ravi takes *m* hours to clean the tank on his own, how long will it take for Harish to clean the tank alone? Give your answer in *m*.

a. $\frac{m}{m-1}$ hours b. $\frac{m-1}{m}$ hours

c. $\frac{m+1}{m-1}$ hours d. $\frac{m+1}{m}$ hours

SECTION - C : BRAINBOX

26. If $(4w - 8)$ is a multiple of 12, then the next 3 multiples of 12 after $(4w - 8)$ in terms of *w* are

a. $4w + 4, 4w + 16, 4w + 28$

b. $4w + 4, 4w + 16, 4w + 32$

c. $4w + 4, 4w + 16, 4w + 16$

d. $4w + 4, 4w + 16, 4w + 48$

27. The total mass of Krishna, Jaya and Malathi is $15p$ kg. If Krishna has a mass of $5p$ kg, Jaya is 2 kg heavier than Krishna, then what is Malathi's mass in terms of *p*?

a. $(5p)$ kg b. $(5p - 2)$ kg

c. $(5p + 2)$ kg d. $(10p - 2)$ kg

28. At 8:00 a.m. Mohan turned on 2 taps to fill up an empty fish tank. Water flowed from each tap at *y* litres per minute. At 8:25 a.m., he turned off both the taps at the same time after he had filled up $\frac{5}{6}$ of the fish tank. The fish tank has a length of 100 cm. If its length is twice its breadth, then what is the height of the fish tank? Give your answer in terms of *y*.

a. $5y + 4$ b. $4y + 5$

c. $6y + 7$ d. $12y$

29. A man donated 14% of his salary to charity and spent 6% of the remaining salary. If he still has ₹14,147 left, then what was his total salary?

a. ₹17,220 b. ₹17,500

c. ₹16,900 d. None of these

30. If $\frac{3P}{4} = \left(P - \frac{5P}{7}\right) + \frac{39}{6}$, then the value of *P* is

a. 0 b. 11

c. 14 d. 15

Darken your choice with HB pencil

1.	(a) (b) (c) (d)	9.	(a) (b) (c) (d)	17.	(a) (b) (c) (d)	25.	(a) (b) (c) (d)
2.	(a) (b) (c) (d)	10.	(a) (b) (c) (d)	18.	(a) (b) (c) (d)	26.	(a) (b) (c) (d)
3.	(a) (b) (c) (d)	11.	(a) (b) (c) (d)	19.	(a) (b) (c) (d)	27.	(a) (b) (c) (d)
4.	(a) (b) (c) (d)	12.	(a) (b) (c) (d)	20.	(a) (b) (c) (d)	28.	(a) (b) (c) (d)
5.	(a) (b) (c) (d)	13.	(a) (b) (c) (d)	21.	(a) (b) (c) (d)	29.	(a) (b) (c) (d)
6.	(a) (b) (c) (d)	14.	(a) (b) (c) (d)	22.	(a) (b) (c) (d)	30.	(a) (b) (c) (d)
7.	(a) (b) (c) (d)	15.	(a) (b) (c) (d)	23.	(a) (b) (c) (d)		
8.	(a) (b) (c) (d)	16.	(a) (b) (c) (d)	24.	(a) (b) (c) (d)		

Chapter

12 Ratio and Proportion

SECTION - A : MATHEMATICAL REASONING

1. A and B together have ₹1210. If A's amount is equal to twice of B's amount, then how much amount does B have?

a. ₹460 b. ₹484
c. ₹550 d. ₹605

2. Two numbers are, respectively, 20% and 50% more than a third number. The ratio of the two numbers is

a. 2 : 5 b. 3 : 5
c. 4 : 5 d. 6 : 7

3. A sum of money is to be distributed among A, B, C, D in the proportion of 5 : 2 : 4 : 3. If C gets ₹1000 more than D, then what is B's share?

a. ₹500 b. ₹1500
c. ₹2000 d. None of these

4. The number of seats for Mathematics, Physics and Biology in a school are in the ratio 5 : 7 : 8. There is a proposal to increase the number of seats by 40%, 50% and 75%, respectively. What will be the ratio of increased seats?

a. 2 : 3 : 4 b. 6 : 7 : 8
c. 6 : 8 : 9 d. None of these

5. In a mixture 60 litres, the ratio of milk and water is 2 : 1. If this ratio is to be 1 : 2, then the quantity of water to be further added is

a. 20 litres b. 30 litres
c. 40 litres d. 60 litres

6. The ratio of the number of boys and girls in a college is 7 : 8. If the percentage increase in the number of boys and girls is 20% and 10%, respectively, what will be the new ratio?

a. 8 : 9
b. 17 : 18
c. 21 : 22
d. Cannot be determined

7. The salaries of Ravi and Sumit are in the ratio 2 : 3. If the salary of each is increased by ₹4000, then the new ratio becomes 40 : 57. What is Sumit's salary?

a. ₹17,000 b. ₹20,000
c. ₹25,500 d. ₹34,000

8. If 0.75 : x :: 5 : 8, then x is equal to

a. 1.12 b. 1.2
c. 1.25 d. 1.30

9. The sum of three numbers is 98. If the ratio of the first to the second is 2 : 3 and that of the second to the third is 5 : 8, then the second number is

a. 20 b. 30
c. 48 d. 58

10. If ₹780 be divided into three parts in the ratio 1 : 2 : 3, then the first part is

a. ₹130 b. ₹190
c. ₹196 d. ₹204

11. The salaries A, B and C are in the ratio 2 : 3 : 5. If the increments of 15%, 10% and 20% are allowed, respectively, in their salaries, then what will be the new ratio of their salaries?

a. 3 : 3 : 10

b. 10 : 11 : 20

c. 23 : 33 : 60

d. Cannot be determined

12. If 40% of a number is equal to two-third of another number, then what is the ratio of the first number to the second number?

a. 2 : 5 b. 3 : 7

c. 5 : 3 d. 7 : 3

13. The fourth proportional to 5, 8 and 15 is

a. 18 b. 24

c. 19 d. 20

14. Two numbers are in the ratio 3 : 5. If 9 is subtracted from each, the new numbers are in the ratio 12 : 23. The smaller number is

a. 27 b. 33

c. 49 d. 55

15. In a bag, there are coins of 25 p, 10 p and 5 p in the ratio 1 : 2 : 3. If there is ₹30 in all, how many 5 p coins are there?

a. 50 b. 100

c. 150 d. 200

16. Susan found a bag of 20 golf balls at a garage sale, and bought the bag for 75 paise. The ratio of cost to number of balls in lowest terms is

a. 20 : 75 b. 15 : 4

c. 4 : 15 d. 75 : 20

17. A stackable CD rack holds 25 CDs and costs ₹4. If Charlie has a collection of 150 CDs, then how much will it cost him to buy enough racks to hold all of his CDs?

a. ₹4 b. ₹24

c. ₹25 d. ₹150

18. A gardening magazine suggested that a good mix for a flower bed is 20 pails of clay dirt, 15 pails of sand, and 5 pails of manure. The ratio of these ingredients is

a. 20 : 15 : 5 b. 10 : 7 : 3

c. 4 : 3 : 1 d. 4 : 3 : 2

19. How many pails of soil will result from the mixture in the previous question?

a. 8 b. 10

c. 20 d. 40

20. Aram estimates that he needs 120 pails of soil for his new flower bed. How many pails of manure will he need?

a. 15 b. 10

c. 5 d. 1

SECTION - B : EVERYDAY MATHS

21. A bag contains 50 p, 25 p and 10 p coins in the ratio 5 : 9 : 4 amounting to ₹206. The number of coins of each type, respectively is

a. 360, 160, 200

b. 160, 360, 200

c. 200, 360,160

d. 200,160,300

22. A mixture contains alcohol and water in the ratio 4 : 3. If 5 litres of water is added to the mixture, then the ratio becomes 4 : 5. The quantity of alcohol in the given mixture is

a. 10

b. 12

c. 15

d. 18

23. There are 5 times as many blue pens as red pens in a bookshop. What is the ratio of the number of blue pens to the total number of pens?

a. 1 : 5 b. 1 : 6

c. 5 : 1 d. 5 : 6

24. A sum of ₹312 was divided among 100 boys and girls in such a way that the boy gets ₹3.60 and each girl gets ₹2.40. The number of girls are

a. 35 b. 40

c. 45 d. 50

25. The perimeter of a rectangle is 56 cm. The ratio of its length to its breadth is 5 : 2. The length of the rectangle is

a. 18 cm b. 20 cm

c. 22 cm d. 24 cm

SECTION - C : BRAINBOX

26. The ratio of the perimeter of square A to the perimeter of square B is 1 : 4. If the perimeter of square B is 64 cm, then the difference between the area of the two squares is

a. 120 cm^2 b. 160 cm^2

c. 200 cm^2 d. 240 cm^2

27. The sum of the numerator and denominator of a fraction is 10. When 3 is added to the numerator and 2 is added to the denominator, the ratio of the numerator to the denominator is 2 : 3. The fraction is

a. $\frac{3}{5}$ b. $\frac{1}{5}$

c. $\frac{3}{7}$ d. $\frac{8}{11}$

28. A, B and C represents three numbers such that the ratio of A to (B + C) is 1 : 3. If the ratio of (A + B) to C is 4 : 1, then the ratio of A : B : C is

a. 5 : 7 : 4 b. 4 : 7 : 5

c. 4 : 11 : 5 d. 5 : 11 : 4

29. The salaries of A, B and C are in the ratio 1 : 2 : 3. If the salary of B and C together is ₹6000, then by what per cent is the salary of C more than that of A?

a. 100 % b. 200 %

c. 300 % d. 600 %

30. A sum of ₹427 is to be divided among A, B and C such that three times A's share, four times B's share and seven times C's share are all equal. The share of C is

a. ₹84 b. ₹140

c. ₹196 d. ₹240

Darken your choice with HB pencil

1.	a b c d	9.	a b c d	17.	a b c d	25.	a b c d
2.	a b c d	10.	a b c d	18.	a b c d	26.	a b c d
3.	a b c d	11.	a b c d	19.	a b c d	27.	a b c d
4.	a b c d	12.	a b c d	20.	a b c d	28.	a b c d
5.	a b c d	13.	a b c d	21.	a b c d	29.	a b c d
6.	a b c d	14.	a b c d	22.	a b c d	30.	a b c d
7.	a b c d	15.	a b c d	23.	a b c d		
8.	a b c d	16.	a b c d	24.	a b c d		

Chapter
13 Symmetry

SECTION - A : MATHEMATICAL REASONING

1. How many lines of symmetry have an equilateral triangle?

a. 1 b. 3
c. 2 d. None of these

2. The number of lines of symmetry in a circle is

a. 0 b. 2
c. 3 d. More than 4

3. Which of the following letters of the English alphabet have both horizontal and vertical lines of symmetry?

a. X b. E
c. K d. M

4. The number of lines of symmetry in a protractor is

a. 0 b. 1
c. 2 d. More than 2

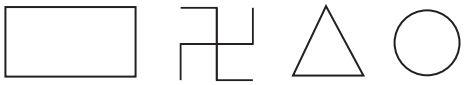
5. Which of the following letters of the English alphabet has only one line of symmetry?

a. H b. X
c. Z d. T

6. The number of lines of symmetry in a ruler is

a. 0 b. 1
c. 2 d. 3

7. Which of the following figures are not symmetric with respect to any line?



(i) (ii) (iii) (iv)

a. (i) b. (ii)
c. (iii) d. (iv)

8. The number of lines of symmetry in 90° – 45° – 45° set-square is

a. 0 b. 2
c. 1 d. 3

9. The number of lines of symmetry in an acute angle is

a. 0 b. 1
c. 2 d. 3

10. The number of lines of symmetry in a rectangle is

a. 0 b. 1
c. 2 d. 4

11. How many digits have two lines of symmetry?

a. 2 b. 3
c. 4 d. 0

12. What is the order of rotational symmetry in a rectangle?

a. 0 b. 1
c. 2 d. 4

13. Which of the following letters of the English alphabet does not have vertical line of symmetry?

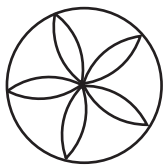
a. M b. H
c. E d. V

14. The number of lines of symmetry in a compass is

a. 0 b. 1

c. 2 d. 3

15. The number of lines of symmetry in the given figure is



a. 3

b. 4

c. 5

d. Infinite

16. The digit having only one line of symmetry is

a. 2 b. 3

c. 5 d. 8

17. The number of capital letters of the English alphabet that have only one vertical line of symmetry is

a. 3 b. 5

c. 7 d. 9

18. The number of lines of symmetry in a regular hexagon is

a. 2 b. 4

c. 6 d. 8

19. How many letters of the English alphabet have no line of symmetry?

a. 8 b. 10

c. 15 d. 12

20. The number of lines of symmetry in a rectangle and a square are

a. Equal

b. Unequal

c. Equal either unequal

d. None of these

SECTION - B : EVERYDAY MATHS

21. The number of lines of symmetry in a divider is

a. 0 b. 1

c. 2 d. 3

22. How many lines of symmetry does an A4-sized sheet have?

a. 2 b. 1

c. 3 d. 4

23. A human body has ___ line of symmetry.

a. 0 b. 1

c. 2 d. 3

24. If you are 100 cm in front of a mirror and then you move some centimetres towards the mirror, how does your image move?

a. Directly b. Indirectly

c. No change d. None of these

25. A fan, in your classroom, have rotational symmetry of order

a. 1 b. 2

c. 3 d. 4

SECTION - C : BRAIN BOX

26. Which letters of the word 'MATHEMATICS' has no line of symmetry?

a. M b. H

c. S d. A

27. How many perpendicular bisectors does a line segment have?

a. 0

b. 1

c. 2

d. Infinite

28. How many perpendicular as a line of symmetry can be drawn on a given ray?

a. Infinite b. 1 c. 2 d. 0

29. How many lines of symmetry does a line have?

a. 0 b. Infinite c. 1 d. 2

30. The order of rotation of a circle is

a. 0 b. 1 c. 2 d. Infinite

Darken your choice with HB pencil

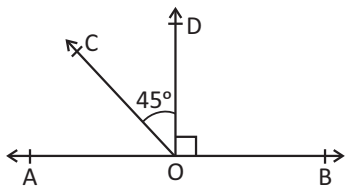
1. (a) (b) (c) (d)	9. (a) (b) (c) (d)	17. (a) (b) (c) (d)	25. (a) (b) (c) (d)
2. (a) (b) (c) (d)	10. (a) (b) (c) (d)	18. (a) (b) (c) (d)	26. (a) (b) (c) (d)
3. (a) (b) (c) (d)	11. (a) (b) (c) (d)	19. (a) (b) (c) (d)	27. (a) (b) (c) (d)
4. (a) (b) (c) (d)	12. (a) (b) (c) (d)	20. (a) (b) (c) (d)	28. (a) (b) (c) (d)
5. (a) (b) (c) (d)	13. (a) (b) (c) (d)	21. (a) (b) (c) (d)	29. (a) (b) (c) (d)
6. (a) (b) (c) (d)	14. (a) (b) (c) (d)	22. (a) (b) (c) (d)	30. (a) (b) (c) (d)
7. (a) (b) (c) (d)	15. (a) (b) (c) (d)	23. (a) (b) (c) (d)	
8. (a) (b) (c) (d)	16. (a) (b) (c) (d)	24. (a) (b) (c) (d)	

Chapter
14
Practical Geometry

SECTION - A : MATHEMATICAL REASONING

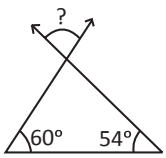
1. If OD is perpendicular to AB and ∠DOC = 45°, then the m (∠BOC – ∠AOC) is

a. 80°
b. 95°
c. 100°
d. 90°



2. The value of the missing angle is

a. 71°
b. 56°
c. 61°
d. 66°



3. When a torch is pointed towards one of the vertical edges of a cube, you get a shadow of cube in the shape of a

a. square
b. rectangle but not a square
c. circle
d. triangle

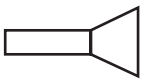
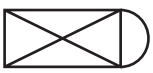
4. What is the maximum number of obtuse angles that a quadrilateral can have?

a. 1
b. 2
c. 3
d. 4

5. How many non overlapping triangles can we make in an *n*-gon (polygon with *n* sides) by joining the vertices?

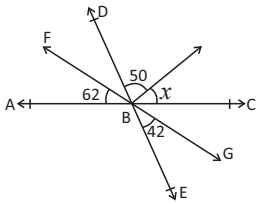
a. $n - 1$
b. $n - 2$
c. $n - 3$
d. $n - 4$

6. Which of the following closed curves is also a polygon ?

a. 
b. 
c. 
d. 

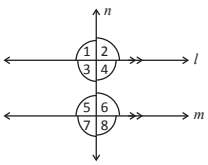
7. In the given figure, ∠ABC, ∠DBE and ∠FBG are straight lines. The value of *x* is

a. 56°
b. 26°
c. 45°
d. 54°



8. If ∠1 = *x* and ∠7 = $\frac{2}{3}x$, then ∠5 is equal to

a. 36°
b. 108°
c. 72°
d. 144°



9. A building is designed by an architect which has a roof top in the form of a structure that has a vertex, one circular base and a curved surface. Which of the following three dimensional figures does it represent?

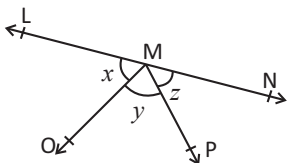
a. Cube
b. Sphere
c. Cone
d. Cylinder

10. The bisector of an angle is produced backwards. Which of the following angles does it bisect at the same vertex?

a. Acute angle
b. Obtuse angle
c. Reflex angle
d. Complete angle

11. If $x + z = y$, then the value of *y* is

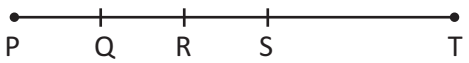
a. 80°
b. 100°
c. 90°
d. 110°



12. If the sides of a right triangle are x, $x + 1$ and $x - 1$, then the hypotenuse is of measure

a. 5 units b. 4 units
c. 1 units d. 0 units

13. The number of line segments in the given figure is



a. 5 b. 11
c. 15 d. 20

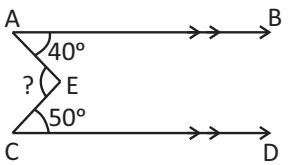
14. If a wheel has 48 spokes, then the angle between a pair of adjacent spokes is

a. $\frac{15°}{2}$ b. $\frac{11°}{2}$
c. 1° d. 180°

15. If two sides of a triangle are of lengths 6 cm and 4 cm, then the third side must be

a. greater than 10 cm b. less than 10 cm
c. equal to 10 cm
d. less than or equal to 10 cm

16. In the given figure, m∠AEC =

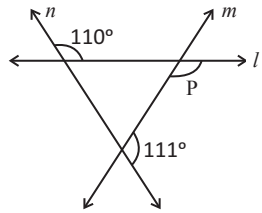


a. 90° b. 40°
c. 50° d. 270°

17. Two complementary angles are in the ratio 1 : 9. The measure of angles are

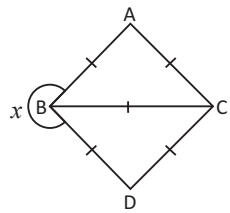
a. 54°, 36° b. 9°, 81°
c. 80°, 10° d. 11°, 79°

18. The measure of ∠P is



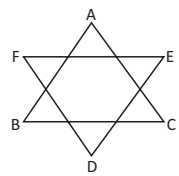
a. 41°
b. 70°
c. 69°
d. 139°

19. ABC and BDC are equilateral triangles. The value of x is



a. 120°
b. 270°
c. 240°
d. 360°

20. The value of ∠A + ∠B + ∠C + ∠D + ∠E + ∠F is



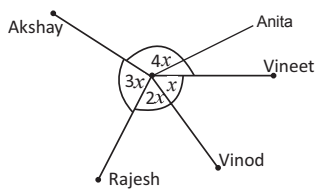
a. 180°
b. 270°
c. 360°
d. 540°

SECTION - B : EVERYDAY MATHS

21. Ramesh jogs in a circular ground. He jogs $\frac{4}{5}$ of the total length of the track and takes a break. He thus covers a total distance of 312 m at an angle of measure

a. 288° b. 300°
c. 330° d. 360°

22. The class teacher of class VI has instructed Vineet, Anita, Vinod, Rajesh and Akshay to stand in such a way that Anita is at the centre; Vineet, Vinod, Rajesh and Akshay are around her as shown in the figure. What will be the angle subtended by Akshay and Rajesh at the centre?



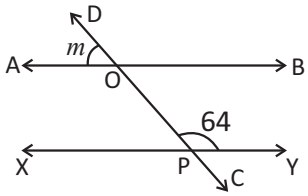
a. 92°
b. 90°
c. 100°
d. 108°

23. Two roads AB and CD meet the third road XY at right angles. This means roads AB and CD are

a. parallel to each other.
b. perpendicular to each other.

c. either parallel or perpendicular.
d. neither parallel nor perpendicular.

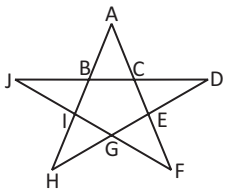
24. Two railway tracks AB and XY are parallel to each other. A third track CD intersects both the tracks at O and P as shown in the figure. The value of $\angle m$ is



a. 116°
b. 66°
c. 26°
d. 56°

25. The difference in the total number of interior angles in BCDEGI and GHI is

a. 1
b. 2
c. 3
d. 4



SECTION - C : BRAINBOX

26. The angle formed at each corner of an envelope is a/an

a. acute angle
b. obtuse angle
c. right angle
d. straight angle

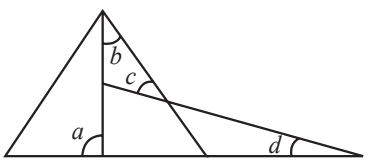
27. When an arm of an angle is extended to double its length, then the measure of the angle

a. doubles
b. remains the same
c. triples
d. becomes half

28. If one angle of a triangle is equal to the sum of the other two angles, then the triangle is a/an

a. isosceles triangle
b. obtuse triangle
c. equilateral triangle
d. right triangle

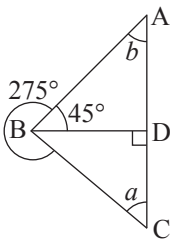
29. The measure of $\angle a$ in terms of b, c and d is



a. $a = b + c - d$
b. $a = c + d + b$
c. $a = b - c - d$
d. $a = c + d - b$

30. By how much is $\angle a$ greater than $\angle b$?

a. 50°
b. 45°
c. 5°
d. 10°



Darken your choice with HB pencil

1.	a b c d	9.	a b c d	17.	a b c d	25.	a b c d
2.	a b c d	10.	a b c d	18.	a b c d	26.	a b c d
3.	a b c d	11.	a b c d	19.	a b c d	27.	a b c d
4.	a b c d	12.	a b c d	20.	a b c d	28.	a b c d
5.	a b c d	13.	a b c d	21.	a b c d	29.	a b c d
6.	a b c d	14.	a b c d	22.	a b c d	30.	a b c d
7.	a b c d	15.	a b c d	23.	a b c d		
8.	a b c d	16.	a b c d	24.	a b c d		

Chapter

15 Logical Reasoning

SECTION - A : MATHEMATICAL REASONING

1. Observe the given letter pattern and choose the correct option.

FAG, GAF, HAI, IAH, ____.

a. JAK b. HAL
c. HAK d. JAI

2. Which of the following completes the given pattern?
ELFA, GLHA, ILJA, _____, MLNA.

a. OLPA b. KLMA
c. LLMA d. KLLA

3. In a top secret message, if LIVING is coded as KGSHLD. How will BUDDHA be coded?

a. ATEEIB b. ASACFX
c. ATCCGZ d. KGSHLD

4. Suresh, the son of Mahesh is married to Sia, whose sister Jia is married to Amar the brother of Suresh. How is Jia related to Mahesh?

a. Daughter-in-law
b. Cousin
c. Sister-in-law
d. Sister

5. A shoe always has

a. Laces b. Leather
c. Strap d. Soles

6. In the school mid-term exams, Disha has marks lower than Diya, but has more marks than Sonam. Another child, Karma also has more marks than Disha. Who has the lowest marks?

a. Disha b. Diya
c. Sonam d. Karma

7. Choose the most meaningful sequence of the following words.

1. Job
2. Independence
3. Study
4. Income
5. Exam

a. 1, 4, 2, 3, 5 b. 2, 5, 3, 1, 4
c. 3, 1, 2, 4, 5 d. 3, 5, 1, 4, 2

8. Riya is your father's mother's grandson's daughter. So, Riya is your

a. niece b. sister
c. uncle d. brother

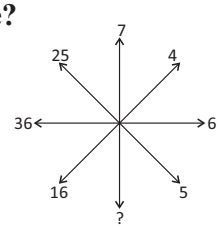
9. The day before yesterday was Sunday. What day will it be the day after tomorrow?

a. Tuesday
b. Wednesday
c. Thursday
d. Friday

10. In a math class, Riki divides 60 chalks by half and adds fifteen. How many chalks are there in all now?

a. 129 b. 130
c. 135 d. 145

11. Which number will replace the question mark in the given figure?



a. 7
b. 14
c. 48
d. 49

12. If, in a certain code, 24657 is written as BPSIN and 1893 as KMLX, then which of the following numbers will be written as PINXS?

a. 24897
b. 45736
c. 45637
d. 45763

13. If E = 5, PEN = 35, then PAGE =

a. 27 b. 28
c. 29 d. 36

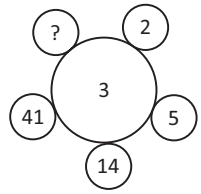
14. Which letter of the English alphabet is 10th to the right of the 15th letter of the English alphabet?

a. S b. T
c. Y d. U

15. Which of the following letters of the English alphabet is exactly midway between G and Q?

a. K b. L
c. M d. M

16. The missing number in the given figure is



a. 122
b. 123
c. 124
d. 112

17. AZBY : CXDW :: EVFU : ?

a. GHTS b. GSTH
c. TGSH d. GTHS

18. What comes next?
2, 6, 14, 26, ?

a. 52 b. 54
c. 42 d. 44

19. If X stands for "add", Y stands for "subtract", Z stands for "divide" and P stands for "multiply", then what is the value of 7P3Y6X5?

a. 5 b. 10
c. 15 d. 20

20. What is the code of BARKS, if MARCH is coded as HCRAM?

a. BASKR b. CBSLT
c. SKRAB d. ISRKAB

SECTION - B : EVERYDAY MATHS

21. Choose the word that is essential for SCHOOL?

a. Student b. Report card
c. Test d. Learning

22. Read the following statements.
Statement 1: All the trees in the park are flowering trees.

Statement 2: Some of the trees in the park are dogwoods.

Statement 3: All dogwoods in the park are flowering trees.
If the first two statements are true, then the third statement is

a. false b. true
c. uncertain d. certain

23. Cup is to coffee as bowl is to

a. dish b. soup
c. spoon d. food

24. Choose the odd one out.

a. Book
b. Index
c. Glossary
d. Chapter

25. Choose the odd one out.

a. Cheese
b. Butter
c. Milk
d. Curd

SECTION - C : BRAINBOX

Directions (Q26 to Q30): Read the information given below to answer the following questions.

(i) A, B, C, D and E are five men sitting in a line facing south while M, N, O, P and Q are five ladies sitting in the second line parallel to the first line and are facing North.

(ii) B, who is just next to the right of D, is opposite to Q.

(iii) C and N are diagonally opposite to each other.

(iv) E is opposite to O who is just next to the right of M.

(v) P, who is just to the left of Q, is opposite to D.

(vi) M is at one end of the line.

26. Who is sitting to the third right of O?

a. Q
b. N
c. M
d. Data inadequate

27. Which of the following pairs is not diagonally opposite to each other?

a. E and Q
b. B and O
c. A and M
d. A and N

28. If B shifts to the place of E, E shifts to the place of Q and Q shifts to the place of B, then who will be to the second right of the person opposite to O?

a. D
b. P
c. E
d. Q

29. If O and P; A and E; B and Q interchange their positions, then who will be the second person to the left of the person opposite to the person to the second right of P?

a. Q
b. A
c. O
d. E

30. In the original arrangement, who is sitting exactly opposite to N?

a. A
b. B
c. C
d. D

Darken your choice with HB pencil

1.	a b c d	9.	a b c d	17.	a b c d	25.	a b c d
2.	a b c d	10.	a b c d	18.	a b c d	26.	a b c d
3.	a b c d	11.	a b c d	19.	a b c d	27.	a b c d
4.	a b c d	12.	a b c d	20.	a b c d	28.	a b c d
5.	a b c d	13.	a b c d	21.	a b c d	29.	a b c d
6.	a b c d	14.	a b c d	22.	a b c d	30.	a b c d
7.	a b c d	15.	a b c d	23.	a b c d		
8.	a b c d	16.	a b c d	24.	a b c d		

Answers

Chapter 1: Knowing Our Numbers

1.	b	2.	c	3.	c	4.	b	5.	c	6.	b	7.	b	8.	c	9.	a	10.	b
11.	b	12.	b	13.	d	14	a	15.	d	16.	c	17.	a	18.	a	19.	a	20.	c
21.	a	22.	a	23.	c	24.	d	25.	d	26.	c	27.	c	28.	c	29.	a	30.	a

Chapter 2: Whole Numbers

1.	d	2.	c	3.	c	4.	d	5.	b	6.	b	7.	a	8.	d	9.	a	10.	d
11.	d	12.	d	13.	c	14	c	15.	b	16.	d	17.	a	18.	c	19.	b	20.	b
21.	c	22.	a	23.	b	24.	c	25.	b	26.	a	27.	d	28.	a	29.	d	30.	d

Chapter 3: Playing with Numbers

1.	b	2.	d	3.	b	4.	d	5.	a	6.	a	7.	c	8.	a	9.	d	10.	a
11.	d	12.	b	13.	a	14	a	15.	b	16.	c	17.	a	18.	c	19.	a	20.	c
21.	a	22.	c	23.	c	24.	b	25.	b	26.	d	27.	b	28.	b	29.	b	30.	c

Chapter 4: Basic Geometrical Ideas

1.	d	2.	c	3.	b	4.	c	5.	b	6.	c	7.	c	8.	c	9.	b	10.	b
11.	c	12.	c	13.	d	14	d	15.	b	16.	b	17.	a	18.	c	19.	a	20.	d
21.	b	22.	b	23.	c	24.	c	25.	c	26.	c	27.	c	28.	c	29.	a	30.	b

Chapter 5: Understanding Elementary Shapes

1.	c	2.	b	3.	c	4.	a	5.	b	6.	b	7.	b	8.	c	9.	d	10.	b
11.	b	12.	b	13.	b	14	b	15.	b	16.	c	17.	a	18.	b	19.	d	20.	a
21.	c	22.	c	23.	b	24.	c	25.	c	26.	d	27.	b	28.	c	29.	c	30.	d

Chapter 6: Integers

1.	d	2.	c	3.	b	4.	a	5.	b	6.	c	7.	b	8.	b	9.	b	10.	b
11.	b	12.	c	13.	b	14	b	15.	b	16.	b	17.	a	18.	c	19.	c	20.	a
21.	b	22.	b	23.	d	24.	b	25.	a	26.	b	27.	a	28.	b	29.	b	30.	a

Chapter 7: Fractions

1.	d	2.	a	3.	c	4.	c	5.	a	6.	c	7.	a	8.	b	9.	c	10.	a
11.	b	12.	b	13.	c	14	b	15.	c	16.	a	17.	c	18.	b	19.	a	20.	b
21.	c	22.	a	23.	c	24.	b	25.	c	26.	d	27.	d	28.	d	29.	b	30.	c

Chapter 8: Decimals

1.	c	2.	d	3.	c	4.	a	5.	c	6.	b	7.	d	8.	d	9.	a	10.	d
11.	d	12.	c	13.	d	14	d	15.	b	16.	a	17.	b	18.	d	19.	d	20.	a
21.	c	22.	a	23.	a	24.	b	25.	c	26.	b	27.	d	28.	c	29.	c	30.	a

Chapter 9: Data Handling

1.	b	2.	a	3.	b	4.	b	5.	a	6.	a	7.	b	8.	a	9.	a	10.	c
11.	b	12.	b	13.	d	14	d	15.	b	16.	c	17.	c	18.	d	19.	d	20.	d
21.	c	22.	c	23.	b	24.	a	25.	a	26.	a	27.	b	28.	a	29.	c	30.	d

Chapter 10: Perimeter and Area

1.	a	2.	a	3.	a	4.	a	5.	a	6.	d	7.	d	8.	c	9.	c	10.	c
11.	a	12.	a	13.	d	14	b	15.	d	16.	d	17.	c	18.	d	19.	b	20.	c
21.	a	22.	a	23.	a	24.	d	25.	c	26.	b	27.	a	28.	c	29.	b	30.	c

Chapter 11: Algebra

1.	a	2.	d	3.	b	4.	b	5.	a	6.	a	7.	d	8.	a	9.	b	10.	d
11.	c	12.	c	13.	d	14	b	15.	b	16.	b	17.	a	18.	b	19.	b	20.	b
21.	a	22.	b	23.	a	24.	a	25.	a	26.	a	27.	b	28.	d	29.	b	30.	c

Chapter 12: Ratio and Proportion

1.	d	2.	c	3.	c	4.	a	5.	d	6.	c	7.	d	8.	b	9.	b	10.	a
11.	c	12.	c	13.	b	14	b	15.	c	16.	b	17.	b	18.	c	19.	d	20.	a
21.	c	22.	a	23.	d	24.	b	25.	b	26.	d	27.	c	28.	d	29.	b	30.	a

Chapter 13: Symmetry

1.	b	2.	d	3.	a	4.	b	5.	d	6.	c	7.	b	8.	c	9.	b	10.	c
11.	b	12.	c	13.	c	14	a	15.	c	16.	b	17.	c	18.	c	19.	b	20.	b
21.	b	22.	a	23.	b	24.	a	25.	c	26.	c	27.	b	28.	d	29.	b	30.	d

Chapter 14: Practical Geometry

1.	d	2.	d	3.	b	4.	c	5.	b	6.	a	7.	b	8.	b	9.	d	10.	c
11.	c	12.	b	13.	b	14	a	15.	b	16.	a	17.	b	18.	d	19.	c	20.	c
21.	a	22.	d	23.	a	24.	a	25.	a	26.	c	27.	b	28.	d	29.	b	30.	c

Chapter 15: Logical Reasoning

1.	a	2.	d	3.	b	4.	a	5.	d	6.	c	7.	d	8.	a	9.	c	10.	c
11.	d	12.	b	13.	c	14	c	15.	b	16.	a	17.	d	18.	c	19.	d	20.	c
21.	a	22.	b	23.	b	24.	a	25.	c	26.	b	27.	d	28.	d	29.	b	30.	a