

June (2026-27)

PATTERNS IN MATHEMATICS

EVEN NUMBERS

- * numbers divisible exactly by 2

Examples:

2, 4, 6, 8, 10, 12

ODD NUMBERS

- * numbers not divisible exactly by 2

Examples:

1, 3, 5, 7, 9, 11

PATTERNS IN MATHEMATICS

Prime Numbers

- * numbers with only two factors 1 & the number itself

Examples:

2, 3, 5, 7, 11, 13

Polygon

- * A closed figure with 3 (or) more sides.

Ex: Square
Triangle

Interior Angle

- * The angle inside a polygon.

SUM of Interior Angles

- * For a polygon with n sides
 $\text{Sum} = (n-2) \times 180^\circ$

Some Facts

* Every number is a multiple of 1 & itself

* For every number, number itself is the least multiple

* The greatest multiple of a number does not exist

For
* Every number, 1 is a smallest factor & the number itself is a greatest factor

Even Numbers :

* numbers exactly divisible by 2. E.g: 2, 4, 8

* The n th even number is $2n$

odd Numbers :

* numbers not exactly divisible by 2.

* E.g: 1, 3, 5, 7

* The n th odd number is $2n - 1$

Prime Numbers :

* numbers having exactly two factors (1 & itself)

* E.g: 2, 3, 5, 7

Composite Numbers :

* numbers having more than two factors

* E.g: 4, 6, 8, 9

Co - Primes :

* Two numbers having only one 1 as a common factor E.g: (11 & 13)

Twin Primes :

* Twin prime numbers which have only

Perfect number:

* Sum of all the factors of a number is two times the number

Divisibility Rules:

If the number is _____ Rules
Divisible by _____

* 2

* The last digit is
0, 2, 4, 6 (or) 8

Eg: 42, 48

* 3

* The sum of the
digits is divisible by 3

Eg: 18, 72

* 4

* The number formed
by the last two
digits is divisible by 4

E.g: 164, 124

* 5

* The last digit is
0 (or) 5

E.g: 25, 35, 100

* 6

* The number divisible
by both 2 & 3

E.g: 42, 48

* 7

* Double the last
digit & subtract it
from the remaining
number. If the number
is 0 (or) divisible by 7

E.g: 343, 105

* 8

* The number formed
by the last three
digits is divisible by

8 Eg: 1248

* 9

* Sum of the digits

* 10

* The last digit is 0

Eg: 100, 750, 410

* 11

* Sum of digit at odd place
- Sum of digit at even place

= 0 (or) 11

Eg: 4832718.

Polygon:

* A simple closed figure made up of line segments is called polygon

Diagonal of a polygon:

* A line segment joining any two non-consecutive vertices of a polygon is called its diagonal.

* Number of diagonals = $\frac{n(n-3)}{2}$

Note:

* The sum of the exterior angles of any polygon is 360°

* The angle sum of a polygon with n sides is $(n-2) \times 180^\circ$
 $S = (n-2) \times 180^\circ$

* Interior angle of a polygon with n sides is equal to
 $\frac{(n-2) \times 180^\circ}{n}$

Triangle:

* A Triangle is a closed figure with three sides, three angles & three vertices.

Types of a Triangle:

* Equilateral Triangle: All 3 sides are equal

* Isosceles Triangle: Two sides are equal

* Scalene Triangle: All sides are unequal

* Right angled Triangle: One angle is 90°

* **Acute angled Triangle** : All angles are less than 90°

* **Obtuse angled Triangle** : One angle is greater than 90°

Quadrilateral :

* A closed figure bounded by four line segments is called a quadrilateral

Parallelogram :

* A quadrilateral in which both pairs of opposite sides are parallel is called parallelogram

Rectangle :

* A parallelogram each of whose angle measures 90° is called a Rectangle

Square :

* A Rectangle having all sides equal is called square.

RHOMBUS :

* A parallelogram having all sides equal is called a Rhombus.

Trapezium :

* A Quadrilateral in which two opposite sides are parallel is called trapezium

kite :

* A Quadrilateral in which two pairs of adjacent sides are equal is known as a kite.

Curve :

i) open curve :

* Any curve whose initial & terminal point do not meet is called an

iii) closed curve :

* Any curve whose initial & terminal point meet is called a closed curve.

NCERT FOLDER

VERY SHORT ANSWER

Q. no : 1, 2, 5, 6, 7, 8, 9, 10

SHORT ANSWER TYPE

Q. no : 3, 4, 5, 7, 8, 10

LONG ANSWER TYPE

Q. no : 1, 4

LEARNERS — CLASS ACTIVITY

1.2 - Q. no : 2, 3

1.3 - Q. no : 4

1.5 - Q. no : 6

1.6 - Q. no : 8

PERFORMERS — CLASS ACTIVITY

1.2 - Q. no : 2, 3

1.3 - Q. no : 4

1.4 - Q. no : 5

1.6 - Q. no : 8

ACHIEVERS — CLASS ACTIVITY

1.2 - Q. no : 1, 2

1.4 - Q. no : 4

1.6 - Q. no : 6, 7