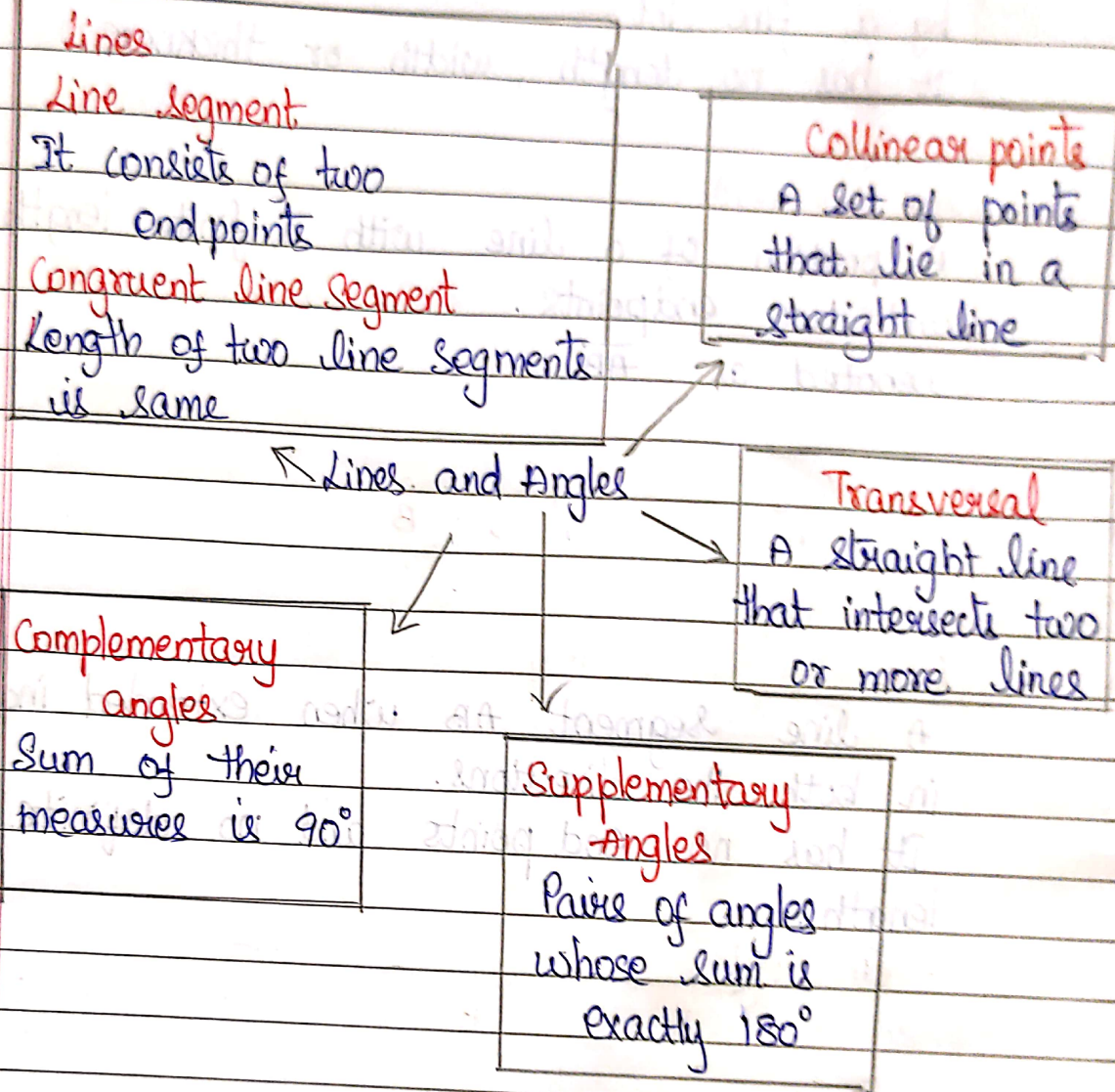


CHAPTER-2 LINES AND ANGLES

MIND MAP



Basic Definitions

Point:

A point is a marker of position indicated by a fine dot.
It has no length, width or thickness

Line segment

A position of a line with a finite length and two endpoints.

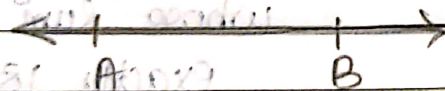
Denoted as $\overline{AB}$



Line

A line segment AB when extended indefinite in both the directions.

It has no end points and no definite length.



Ray:

A line segment AB when extended indefinitely in one direction

It has one fixed endpoint and no definite length

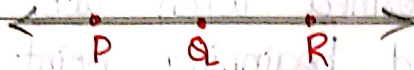


Ray $\overrightarrow{AB}$

Important facts

Collinear points

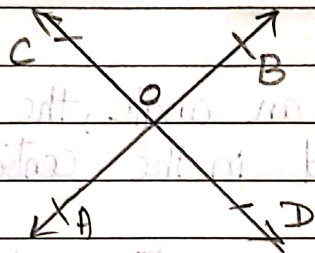
If a line contains all three or more points, then those points are said to be collinear.



Points P, Q, R are collinear.

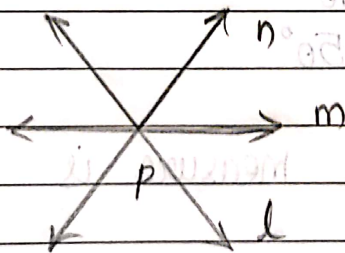
Intersecting lines

Two lines that share a same point



Concurrent lines

Two or more lines in a plane are concurrent if they all meet at a single common point.



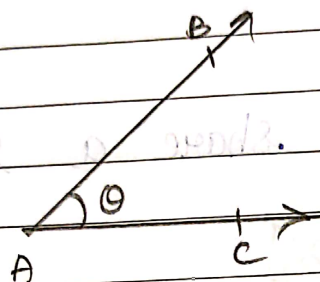
Parallel lines

Two lines in a plane that never intersect or overlap, even when extended indefinitely in both directions.



Angles and their types

An angle is formed when two rays originate from a shared beginning point (Vertex).
The rays are called arms of the angle.



Vertex - A

Arms - $\overrightarrow{AB}$ $\overrightarrow{AC}$

Angle - $\angle BAC$, $\angle CAB$

When representing an angle, the vertex must always be positioned in the centre.

For example, $\angle BAC$ represents angle A.

Acute angle

An angle whose measure is more than 0° but less than 90° .

Eg: 50°

Right angle

An angle whose measure is exactly 90° .

Obtuse angle

An angle whose measure is more than 90° but less than 180° .

Eg: 130°

Straight angle

An angle whose measure is exactly 180° .

Reflex angle

An angle whose measure is greater than 180° but less than 360° .

Special pairs of angles

Complementary angles: Two angles whose sum equals 90°

Supplementary angles: Two angles whose sum equals 180°

Adjacent angles: Two angles that share a common vertex and common side

Linear pair: A pair of adjacent angles have one common arm and other arms as opposite rays

Vertically opposite angles: Formed when two lines intersect. They share no common arms and are always equal to each other

Parallel lines and Transversals

Transversal

A straight line that intersects two or more lines.

Properties when a transversal cuts parallel lines

- * Corresponding angles are equal
- * Alternate interior angles are equal
- * Alternate exterior angles are equal
- * Co-interior angles are supplementary (sum = 180°)

NCERT FOLDER

Very short answer
Q.No 3, 4, 5, 6, 7, 9

Short answer type
Q.No 4, 5, 6, 7, 10

Long answer type
Q.No 1, 2, 3

LEARNERS - CLASS ACTIVITY

1.1 Q.No : 1

1.2 Q.No : 2

1.3 Q.No : 3

1.4 Q.No : 4

1.5 Q.No : 5

1.6 Q.No : 6

1.7 Q.No : 7

1.8 Q.No : 8

1.9 Q.No : 9

1.11 Q.No : 10

PERFORMERS

CLASS ACTIVITY

1.2 Q.No : 1, 2

1.3 Q.No : 3

1.4 Q.No : 4

1.5 Q.No : 5

1.6 Q.No : 6

1.7 Q.No : 7

1.8 Q.No : 8

1.9 Q.No : 9

1.11 Q.No : 10

ACHIEVERS - CLASS ACTIVITY

1.1

Q.NO: 1

1.2

Q.NO: 2

1.3

Q.NO: 3

1.4

Q.NO: 4, 5

1.7

Q.NO: 6

1.8

Q.NO: 7

1.9

Q.NO: 8

1.11

Q.NO: 9, 10