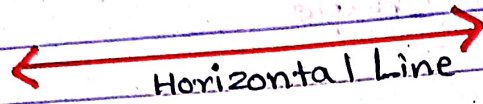
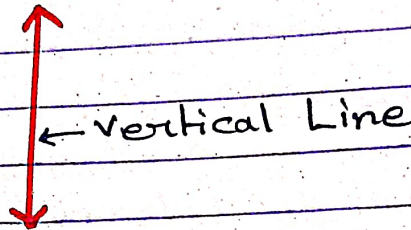


TYPES OF LINES

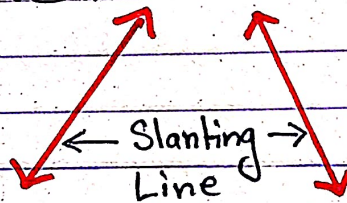
- Horizontal Line (Sleeping Line): - A line that runs straight from left to right.



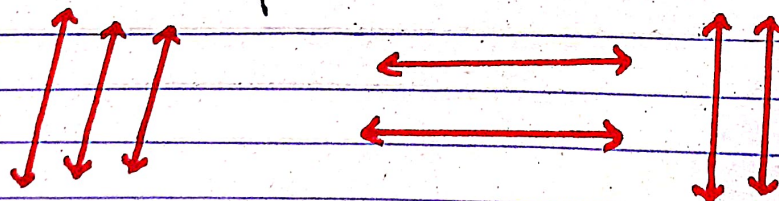
- Vertical Line (Slanting Line): - A line that runs straight up and down.



- Slanting / Diagonal Line: A straight line that is slanted or oblique, neither vertical nor horizontal.

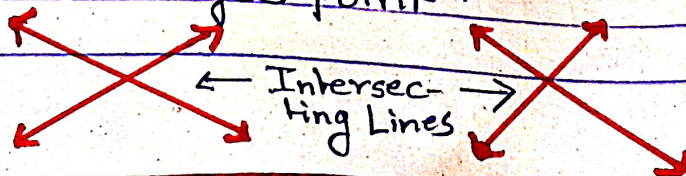


- Parallel Lines: - Two or more lines that are always the same distance apart and never meet or cross each other.

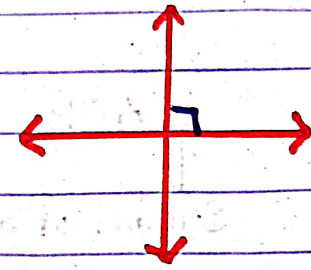


Parallel lines

- Intersecting Lines - Lines that cross or cut through each other at a single point.



Perpendicular Lines:- A special type of intersecting lines that crosses to form a perfect 'L' shape or a 90-degree corner (angle).



Perpendicular Line.

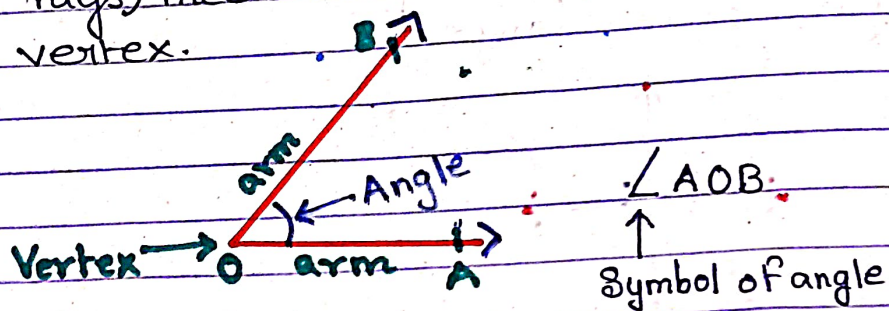
WORKSHEET

Draw using scale and pencil:-

- 1) Draw a vertical line of length 5cm.
- 2) Draw a line that runs straight from left to right of length 6.5cm.
- 3) Draw two lines that are always same distance apart and never meet. Also give one real life example of it.
- 4) Name the special type of intersecting lines that
 - a) crosses to form a perfect 'L'.
 - b) Draw the lines mentioned in the above question.
 - c) Give one real life example of it.
- 5) Draw intersecting lines.

TYPES OF ANGLES

Angle - An angle is formed when two straight lines (or rays) meet at a common end point called vertex.



Parts of an angle:-

a) Vertex:- The Corner point where the two lines (or rays) meet in an angle.

b) Arms/Sides:- The two straight lines (or rays) that form the angle.

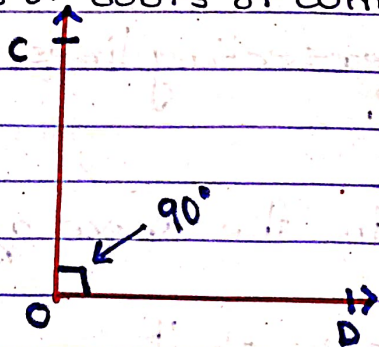
TYPES OF ANGLES:-

1) Right angle - An angle which is exactly 90° .

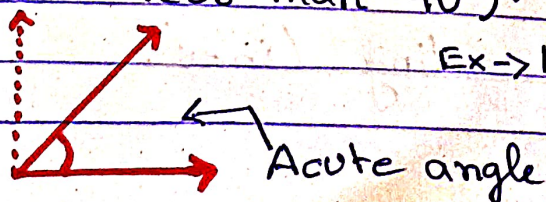
* It looks like a corner of a square or the alphabet 'L'.

Ex → Hands of a clock at 3:00 or 9:00.

• Edges of doors or window frame

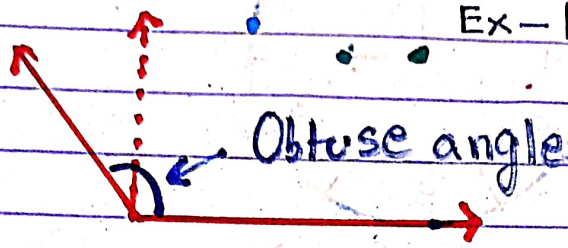


2) Acute angles - Angles smaller than right angle (i.e. less than 90°).



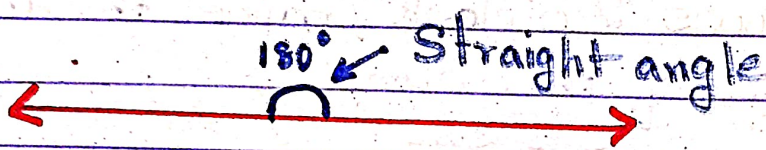
Ex → Letter 'V', Pizza slice

2) Obtuse angle:- Angle more than right angle but less than straight angle (i.e. more than 90° and less than 180°).



Ex - Hockey stick.

3) Straight angle:- An angle which is exactly 180° .



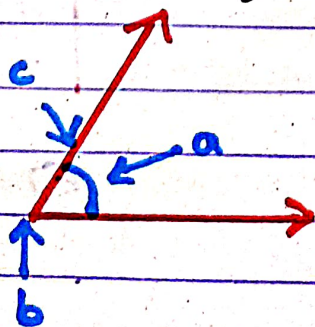
Ex - A flat ruler.

Worksheet:-

A) Draw using protractor, scale and pencil:-

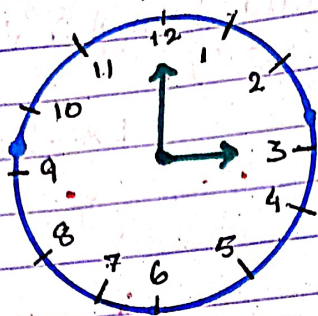
- 1) Draw a right angle.
- 2) Draw angle 60° . Write the name of the angle.
- 3) Draw 120° using scale and protractor. Write the name of the angle.

B) Label the parts of an angle.



WORKSHEET

CASE STUDY

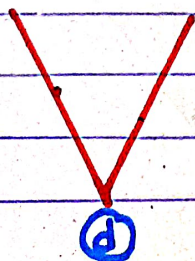
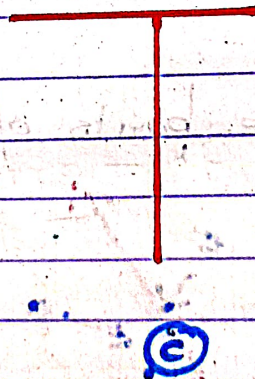
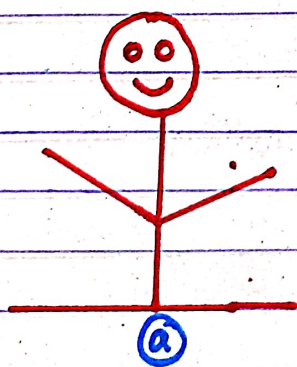


Answer based on above picture:-

- 1) Name the angle formed by the hands of the clock.
- 2) If the clock shows 2'o'clock, name the angle formed by hands of the clock _____
- 3) At what time will the hands form a straight angle _____
- 4) The meeting point of the two hands of the clock called in an angle _____

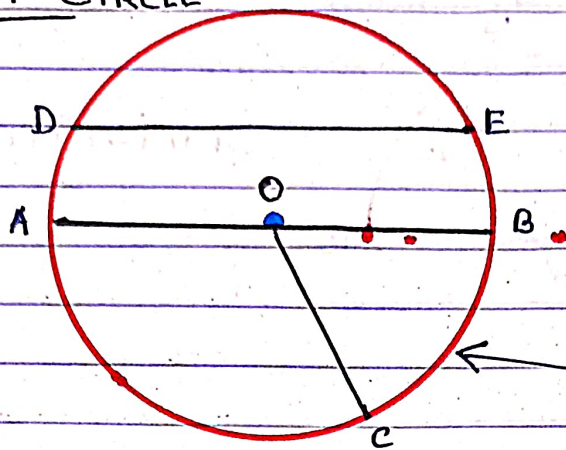
WORKSHEET

Identify the angle and mark right angles in green, acute angle in orange and obtuse angle in purple:-



CIRCLE

PARTS OF A CIRCLE



- $O \rightarrow$ Centre
- $\overline{AB} \rightarrow$ Diameter
- $\overline{OC}, \overline{OB}, \overline{OA} \rightarrow$ Radii (Plural of Radius)
- $\overline{DE} \rightarrow$ Chord
- $\leftarrow$ Circumference

CIRCLE :- A circle is a simple 2D closed figure with fixed radius.

- All the points on the circumference of a circle are equidistant (at same distance) from the centre.
- It has no corners no sides.

CHORD :- A line segment whose end points lie on the circumference of a circle.
Ex - $\overline{DE}, \overline{AB}$ (above figure)

DIAMETER :-

- A straight line that passes through the centre of a circle.
- divides the circle in two equal halves (parts)
- touches both sides of a circle's edge
- It is the longest chord of a circle.

Ex - $\overline{AB}$ (above picture)

RADIUS :-

- Fixed distance between centre and any point on the circumference of a circle.

Radius is Half of diameter

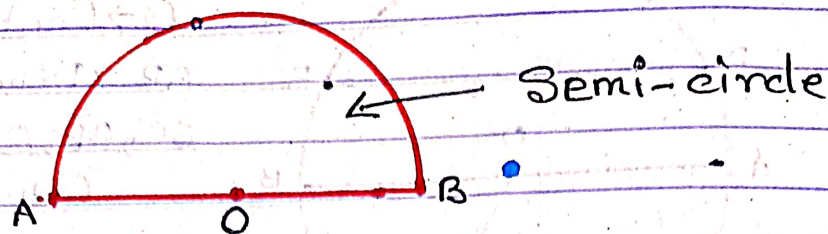
$$R = D \div 2$$

Diameter is two times of radius

$$D = 2 \times R$$

CIRCUMFERENCE - Boundary of a circle.

SEMI-CIRCLE : Half of circle



Ex $\rightarrow$ Protractor

WORKSHEET

1) Draw a circle with radius

a) 3cm

b) 3.5 cm

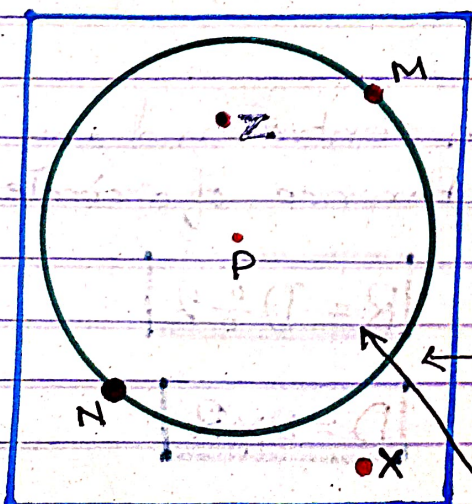
2) Calculate radius if diameter is 8cm

3) Find the length of the longest chord of a circle if its half is 5cm.

4) STATE TRUE OR FALSE :-

a) All diameters are chord -

b) All chords are diameters -



Centre - $\bullet P$

Points on the circumference - $\bullet M$
 $\bullet N$

Exterior Points - $\bullet X$

Interior Points - $\bullet Z, \bullet P$

Exterior
(Outside the circle)

Interior (Inside the circle)