

Class 10

Economics

Ch-4 Market and it's Types:

Q1: What is a local market?

Q2: What is a national market?

Q3: What is an international market?

Q4: What is a commodity market?

Q5: What is a factor market?

(Thu) Cl-X, EVS

Ch-4 Topic(Timber and its Alternatives)

Home Assignment....

- 1) What do you mean by timber?
- 2) What is an alternative to wood?
- 3) What are the uses of wood?
- 4) Why is timber so important?
- 5) Why do we use timber in construction?

Commercial application:

Class 10

Ch-2 sales and selling process

Q1: What is a sales?

Q2: What is meant prospecting?

Q3: What is a preparation

Q4: What is an approach?

Q5: What is presentation?

Q6: What is object handling?

DREAMLAND SCHOOL

CLASS-X (Session-2020-21)

PHYSICAL EDUCATION (6th Subject)

HOME WORK-1

GAME:

BASKETBALL

The Rules

Basketball is a team sport.

Two teams of five players each try to score by shooting a ball through a hoop elevated 10 feet above the ground.

The game is played on a rectangular floor called the court, and there is a hoop at each end.

The court is divided into two main sections by the mid-court line.

If the offensive team puts the ball into play behind the mid-court line, it has ten seconds to get the ball over the mid-court line.

If it doesn't, then the defence gets the ball.

Once the offensive team gets the ball over the mid-court line, it can no longer have possession of the ball in the area behind the midcourt line.

If it does, the defence is awarded the ball.

The ball is moved down the court toward the basket by passing or dribbling. The team with the ball is called the offense. The team without the ball is called the defence.

The defence tries to steal the ball, contest shots, deflect passes, and garner rebounds.

Points

When a team makes a basket, they score two points and the ball goes to the other team.

If a basket, or field goal, is made outside of the three-point arc, then that basket is worth three points. A free throw is worth one point.

Free throws are awarded to a team according to some formats involving the number of fouls committed in a half and/or the type of foul committed.

Fouling a shooter always results in two or three free throws being awarded the shooter, depending upon where he was when he shot. If he was beyond the three-point line, then he gets three shots.

Other types of fouls do not result in free throws being awarded until a certain number have accumulated during a half (called “team fouls”).

Once that number is reached, then the player who was fouled is awarded a '1-and-1' opportunity. If he makes his first free throw, he gets to attempt a second. If he misses the first shot, the ball is live on the rebound.

Dimensions of a Basketball Court

A basketball court has symmetry; one half of the court is a mirror image of the other. The entire basketball court (see Figure 1) is 94 feet by 50 feet. On each half-court, painted lines show the *free throw lane* and *circle*, as well as the *three-point arc*, whose distance from the basket varies based on the level of hoops being played.

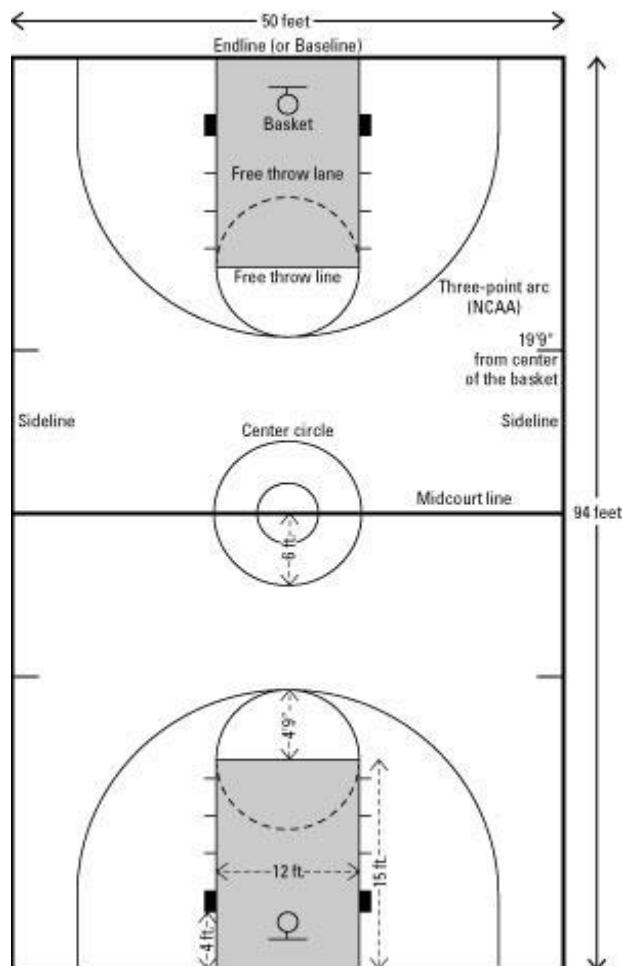


Figure 1: The American court.

Indoor basketball courts are almost always made of hardwood. Outdoor courts are most commonly composed of asphalt.

The borders of the court have their own common-sense names:

- Along the length of the court, the borders are the *side-lines*.
- Along the ends, the borders are the *end lines*, or *baselines*.
- Separating both halves of the court is a *midcourt line*.
- In the very centre of the midcourt line is the *centre circle* (12 feet in diameter), where the *centre toss* takes place to begin the game.

BASKETBALL EQUIPMENT:

The only essential **equipment** in a **basketball game** is the ball and the court: a flat, rectangular surface with baskets at opposite ends. Competitive levels require the use of more **equipment** such as clocks, score sheets, scoreboard(s), alternating possession arrows, and whistle-operated stop-clock systems.

ASSIGNMENT QUESTIONS:-

1. Write down five rules of Basketball.
2. Draw a Basketball court with dimensions.
3. What are the necessary equipment's of Basketball?

CHITTRITA BANERJEE

CLASS – 10
COMPUTER APPLICATION

STRING IN JAVA

Strings, which are widely used in Java programming, are a **sequence of characters**. In Java programming language, strings are treated as objects.

The `java.lang.String` class is used to create a string object.

There are two ways to create String object:

1. By string literal
2. By new keyword

Java String class provides a lot of methods to perform operations on strings such as `compare()`, `concat()`, `equals()`, `split()`, `length()`, `replace()`, `compareTo()`, `intern()`, `substring()` etc.

Creating Strings:

The most direct way to create a string is to write –

`String name = "Simran";` (for example)

Whenever it encounters a string literal in your code, the compiler creates a String object with its value in this case, Simran.

String Concatenation

The `+` operator can be used between strings to combine them. This is called **concatenation**.

Example

```
String firstName = "Piu";
String lastName = "Das";
System.out.println(firstName + " " + lastName);
```

Note that we have added an empty text (" ") to create a space between `firstName` and `lastName` on print.

You can also use the `concat()` method to concatenate two strings.

String class methods:

The `java.lang.String` class provides many useful methods to perform operations on sequence of char values.

Method	Description
char charAt(int index)	returns char value for the particular index
int length()	returns string length
String substring(int beginIndex)	returns substring for given begin index.
String substring(int beginIndex, int endIndex)	returns substring for given begin index and end index.
boolean isEmpty()	checks if string is empty.
String concat(String str)	concatenates the specified string.
String replace(char old, char new)	replaces all occurrences of the specified char value.
String toLowerCase()	returns a string in lowercase.
String toUpperCase()	returns a string in uppercase.
String trim()	removes beginning and ending spaces of the string.
int indexOf(int ch)	returns the specified char value index.
int lastIndexOf(int ch)	Returns the index within this string of the last occurrence of the specified character.
int indexOf(int ch)	Returns the index within this string of the first occurrence of the specified character.
boolean equals(Object another)	checks the equality of string with the given object.

ASSIGNMENT IV (PART – 1)

1. Define String.
2. Define String Concatenation with an example.
3. How to create a string object?
4. What is use of string trim?
5. Which function/method will you use to return the length of the string?

Class X

30.04.2020

History

The First War Of Independence (1857)

Consequences of the Revolt

End Of Company's Rule and Changes introduced in the administrative set up

- a. The Act of 1858 transferred the Government of India from the Company to the Crown.
- b. Company's Board of Control and the Court of Directors were abolished.
- c. The Secretary of State was to be assisted by the India Council consisting of fifteen members.
- d. Appointments to the Civil Service were to be made by the Secretary of State in Council.

Queen Victoria's Proclamation

The first significant result of the Revolt was the end of the rule of the East India Company in India. The Queen's proclamation incorporating the transfer of governance from East Indian Company to the British crown was made public at Allahabad, on 1st November, 1858, by Lord Canning, the first Viceroy of India. The proclamation declared that the British would not interfere in their internal matters except in the case of 'misconduct' and 'anarchy'. After the proclamation of the queen, the policy of 'Doctrine of Lapse' was abolished.

Relations with Princely States

There was a change in the policy of the new Government towards the Indian Princes, in order to make them loyal to the British. It assured them that all the treaties entered with the company would be honoured. Their territories would not be annexed to the British crown. They were given the right to adopt sons and successors.

End of Peshwaship and the Mughal Rule

The war also ended the Peshwaship and the Mughal rule. As Nana Sahib, the adopted son of Peshwa Baji Rao II, who had taken part in the war could not be traced, the office of the Peshwa was abolished. Similarly, the title of Mughal Emperor was also abolished with the death of Bahadur Shah II in 1862.

Policy of Divide and Rule

After 1858, the British continued their policy of 'Divide and Rule' by giving special protections and concessions to the Princely States, encouraging hatred and ill-feelings among the Hindus and the Muslims, so that the people of India could never challenge the British authority.

Changes in the Army

The Indian Army had been mainly responsible for the crisis of 1857. After the revolt, it was thoroughly reorganised and built up on the policy of 'division and counterpoise.' The strength of the European troops in India was increased from 45,000 to 65,000 and the number of Indian troops was reduced from 2,38,000 to 1,40,000. All big troops and artillery departments were reserved for the Europeans. Discrimination on the basis of caste, region and religion was practised in the recruitment to the army. Newspaper, journals and nationalist publications were prevented from reaching the Indian army to keep them separated from the rest of the population.

Economic Exploitation

The Revolt of 1857 ended an era and sowed the seeds of a new era i.e., the era of Territorial Expansion gave place to the era of Economic Exploitation. India became a typical colony of the British, by exporting raw materials and importing British goods. Peasants, rural artisans etc. were impoverished under the British rule.

Causes of Failure of the Revolt of 1857

The Revolt of 1857 was an unsuccessful but heroic effort to eliminate foreign rule. The main causes were disunity of the Indians, lack of complete nationalism etc. which actively helped the British. Lack of coordination between the sepoys, peasants, zamindars and other classes, was also a reason. Also each of the classes had their own motives for participating in the revolt.

Significance of the Revolt

The important element of the revolt lay in Hindu-Muslim unity. People exhibited patriotic sentiments without any touch of communal feelings. No doubt, it began as a mutiny of soldiers, but soon turned into a revolt against the British rule in general.

Home Work

- 1. What impact did the uprising of 1857 have on the Mughal Rule?**
- 2. Mention four administrative changes that the British Government brought about regarding the East India Company's rule in India.**
- 3. Who became the first Viceroy under the act of 1858?**
- 4. Explain the policy of Divide and Rule pursued by the British in India.**
- 5. Explain any 5 consequences of the Revolt of 1857.**

CHAPTER – TRANSPERSION

EXPLANATION –

- **EXPERIMENT TO SHOW DIFFERENT MAGNITUDE OF TRANSPERSION FROM THE TWO SURFACE OF DICOT LEAF**

AIM OF THE EXPERIMENT

To prove more transpiration occurs from the lower (ventral) surface of a dicot leaf than upper (dorsal) surface. (OR) To prove unequal transpiration from the two surfaces of a dorsiventral leaf.

REQUIREMENTS

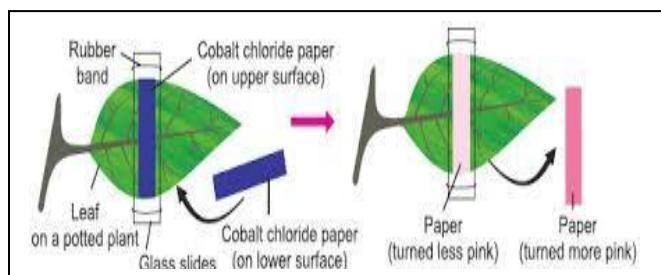
A well watered potted dicot plant, strips of dry cobalt chloride paper, glass slides, clips.

PROCEDURE FOR THE EXPERIMENT

1. A well watered dicot plant has to be selected for this experiment..
2. Cobalt chloride paper will be blue in color when it is dry and become pink when it absorbs moisture. Due to this characteristic feature it acts as a chemical indicator in this experiment.
3. One strip of this dry blue cobalt chloride paper is kept on either surface of a healthy dorsiventral leaf and are covered by glass slides with the help of clips.
4. Now the whole experimental setup is kept under bright sunlight. Observe closely the changes which occur in cobalt chloride papers placed on both the surfaces.

RESULT

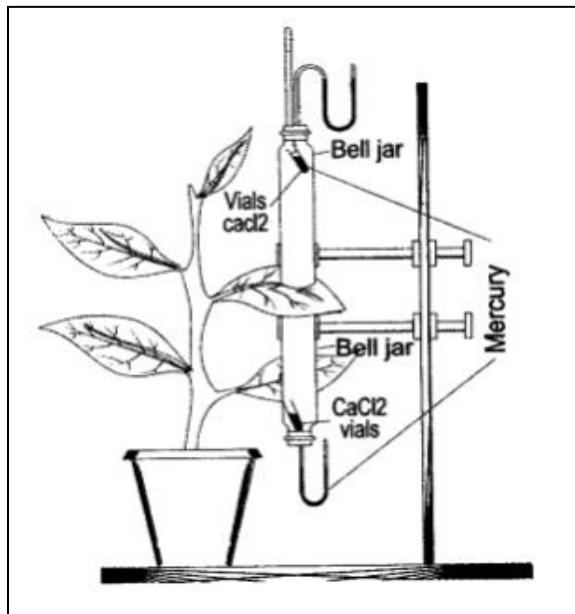
Within few minutes we observe the cobalt chloride paper kept on the lower or ventral surface of the leaf turns into deep pink color but the strip of cobalt chloride paper kept at the upper surface remains unchanged or it takes longer time to change into pale pink color. The reason for this is more stomata are present on the ventral or lower surface of a dicot leaf than the upper or dorsal surface. Due to this more water vapor from the ventral surface is released than dorsal surface and hence cobalt chloride paper kept at the lower surface changes into pink color immediately.



GARREAU'S POTOMETER

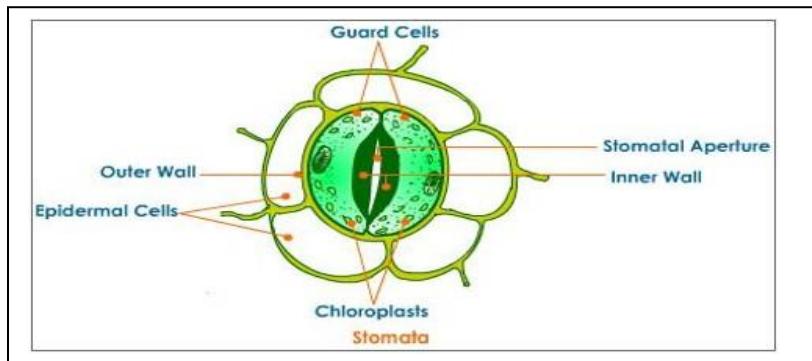
- The apparatus shown here is Girreau's poto-meter designed to demonstrate unequal transpiration from the two surfaces of a dorsiventral leaf.
- Before keeping the leaf in between the cups, anhydrous calcium chloride (CaCl_2) contained in two small vials were weighed and placed in both the cups.
- The ends of the cups were closed with corks through which two mercury manometers were connected. After a few hours, CaCl_2 vials were taken out and weighed again.
- The CaCl_2 vials are kept inside the cup to absorb water.

- After few hours, the weight of the CaCl₂ vials will increase because they will absorb the water which is transpired by the leaf of the plant.
- Manometers are used to indicate the unequal transpiration from two surfaces of a dorsivertral leaf by showing difference in rise in their mercury levels.



GARREAU'S POTOMETER

- **STRUCTURE OF STOMATA**



- ❖ Stomata are minute structures occurring in large numbers on the lower epidermis of a leaf.
- ❖ Transpiration occurs as long as the stomata are open , but it stops when they are closed.
- ❖ The opening & closing mechanism of stomata is regulated by the amount of water and solutes present in the guard cell.
- ❖ As the stomata open during the daytime , the diffusion of gases in and out starts fulfilling the need for photosynthesis as well as allowing transpiration.
- ❖ When water content of leaf is short then guard cells fails to remain turgid & turns flaccid thereby closing the stomata.
- ✓ It is seen that some plants wilt during the midday and again recover in the evening - this is because in the daytime the stomata is open , hence transpiration is occurring. The rate of transpiration in midday exceeds the rate of water absorption by the roots. Hence the water content of the leafs fall short, and thus becomes flaccid resulting in wilting. Due to less water content of leaf the guard cells becomes

flaccid and stomata closes. As stomata closes , no more transpiration occurs. Thus now all water absorbed by root is retained in leaf , thereby regaining its turgidity. Thus plants recover.

- **INTERNAL FACTORS AFFECTING TRANSPERSION**

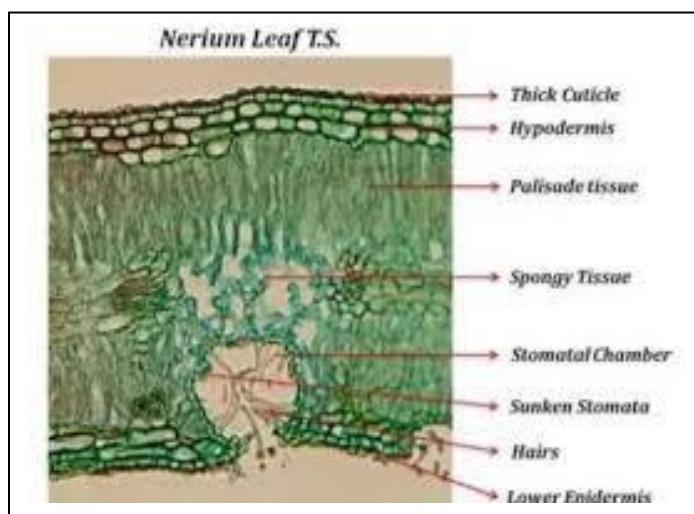
- 1) **Intensity of sunlight**- more the intensity more will be the transpiration. During day the stomata are open to facilitate the inward diffusion of CO₂ for photosynthesis. At night they are closed. Therefore, more transpiration occurs. When it is cloudy the stomata are partially closed & transpiration is reduced.
- 2) **Temperature** – if the outside temperature is higher there is more evaporation from the leaves therefore more transpiration. Warm air can hold more water than cold air.
- 3) **Velocity of wind**- if the wind blows faster the water vapour released during transpiration is removed faster and the area outside the leaf does not get saturated with water vapour. Thus there is space for more water vapour to come out. Thus transpiration increases.
- 4) **Humidity**- high humidity in the air reduces the rate of outward diffusion of the internal water vapour across stomata thereby reducing rate of transpiration.
- 5) **Carbon dioxide** – increase in the CO₂ level in the outside air over normal 0.03% causes stomatal closure & decrease of transpiration.
- 6) **Atmospheric pressure** - decrease in atmospheric pressure increases rate of transpiration.

- **EXTERNAL FACTORS AFFECTING TRANSPERSION**

- 1) Water content of leaves – if water content of leaves reduces then leaves wilt, stomata closes & transpiration decreases. If water content increases then guard cells become turgid, stomata opens & transpiration increases.

- **ADAPTATIONS IN PLANTS TO REDUCE EXCESSIVE TRANSPERSION**

- 1) Sunken stomata –stomata sunken towards inside or covered by hair
- 2) Fewer stomata- less stomata less transpiration
- 3) Narrow leaves – narrow leaves means less surface area , thus lesser no. of stomata , thus less transpiration.
- 4) Reduced exposed surface – this will help to hide the stomata thus less transpiration.
- 5) Loss of leaves – no leaves no matter of transpiration.
- 6) Thick cuticle- more thicker the cuticle , it will cover the stomata , thus less transpiration.



- **NEED FOR TRANSPiration**

- 1) Cooling effect
- 2) Suction force – loss of water from plants helps to create a pull of water thus enabling water being drawn up by the root.
- 3) Distribution of water & mineral salts.

GUTTATION

The loss of water from the margins of the leaf in the form of water droplets through specialised pores called **Hydathodes** present in the margin of leaves is called **Guttation**.

BLEEDING

The exudation of plant sap from the ruptured/cut surface of the plant is known as **Bleeding**.

ASSIGNMENT 5 – DRAW THE DIAGRAMS FOR DIAGRAM BASED QUESTIONS

- 1) Name the following-

- a) Exudation of plant sap from the ruptured part of plant.
- b) A plant having sunken stomata
- c) Openings present on the margin of the leaves through which water escapes.

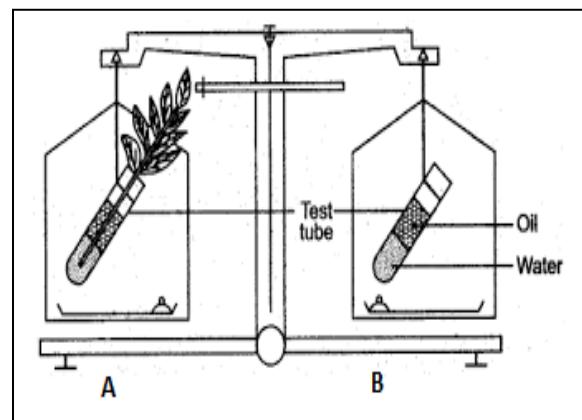
- 2) Give reason-

- a) Balsam plants wilt during midday & recover in the evening.
- b) Land plants die if their roots remain waterlogged.

- 3) Define –

- a) Cuticular transpiration
- b) Bleeding

- 4)
 - 1) Name the process intended for study.
 - 2) When the weight of the test tube A & B is taken before & after the experiment what is observed?justify
 - 3) What is the purpose of keeping test tube B in the experimental set up?



Mathematics- Reflection

Class-X

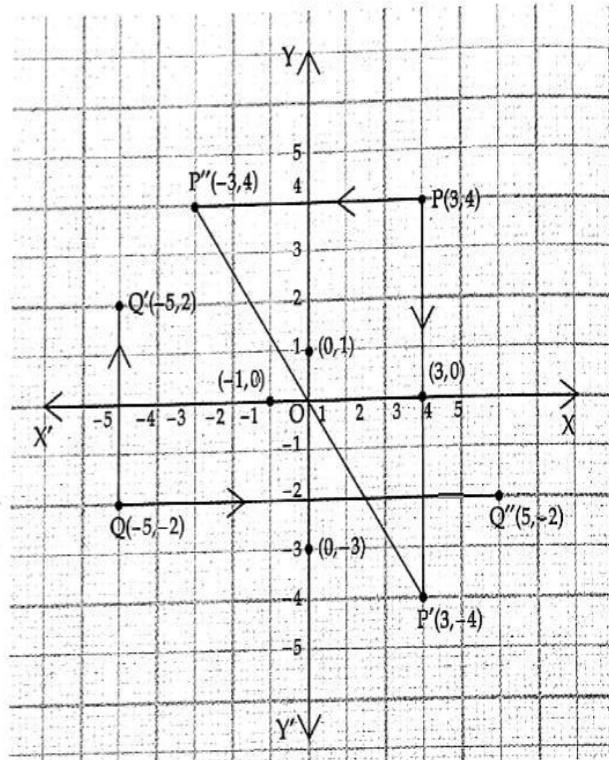
Assignment:- Date:-30.04.20

Example 1 Points $(3, 0)$ and $(-1, 0)$ are invariant points under reflection in the line L_1 ; points $(0, -3)$ and $(0, 1)$ are invariant points on reflection in line L_2 .

- (i) Name the lines L_1 and L_2 .
- (ii) Write down the images of points $P(3, 4)$ and $Q(-5, -2)$ on reflection in L_1 . Name the images as P' and Q' respectively.
- (iii) Write down the images of P and Q on reflection in L_2 . Name the images as P'' and Q'' respectively.
- (iv) State or describe a single transformation that maps P' onto P'' .

Solution.

- (i) Since the points $(3, 0)$ and $(-1, 0)$ are invariant points under reflection in the line L_1 , the line L_1 is the x -axis.
Similarly, the line L_2 is the y -axis.
- (ii) The points P' and Q' are $(3, -4)$ and $(-5, 2)$ respectively.
- (iii) The points P'' and Q'' are $(-3, 4)$ and $(5, -2)$ respectively.
- (iv) The single transformation that maps P' onto P'' is the reflection in the origin.

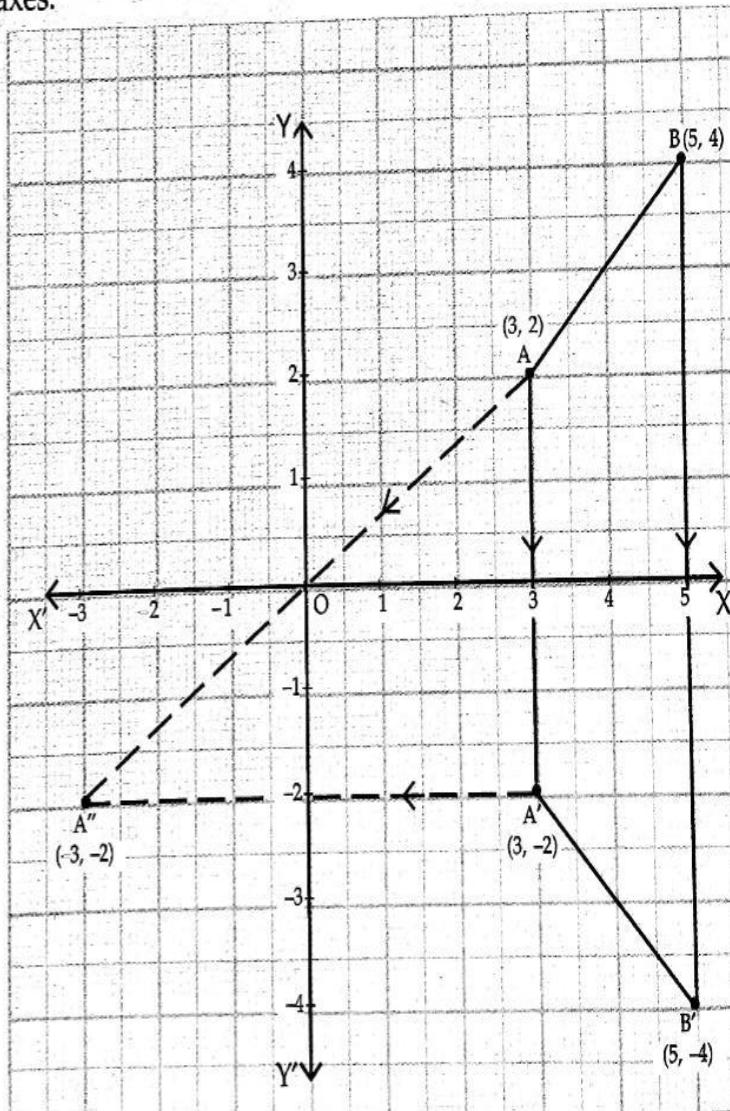


Example .2 Attempt this question on graph paper.

- (i) Plot A(3, 2) and B(5, 4) on the graph paper.
- (ii) Reflect A and B in the x -axis to A', B'. Plot these on the same graph paper.
- (iii) Write down
 - (a) the geometrical name of the figure ABB'A'.
 - (b) the axis of symmetry of ABB'A'.
 - (c) the measure of the angle ABB'.
 - (d) the image A' of A, when A is reflected in the origin.
 - (e) the single transformation that maps A' to A'.

Solution. Take 1 cm = 1 unit on both axes.

- (i) See the adjoining figure:
- (ii) Since the points A', B' are the reflections of the points A(3, 2), B(5, 4) respectively in the x -axis, the coordinates of A', B' are (3, -2), (5, -4).
- (iii) (a) The figure ABB'A' is an isosceles trapezium.
(b) The axis of symmetry of ABB'A' is the x -axis.
(c) $\angle ABB' = 45^\circ$.
(d) The coordinates of A'' are (-3, -2).
(e) The single transformation that maps A' to A'' is the reflection in the y -axis.

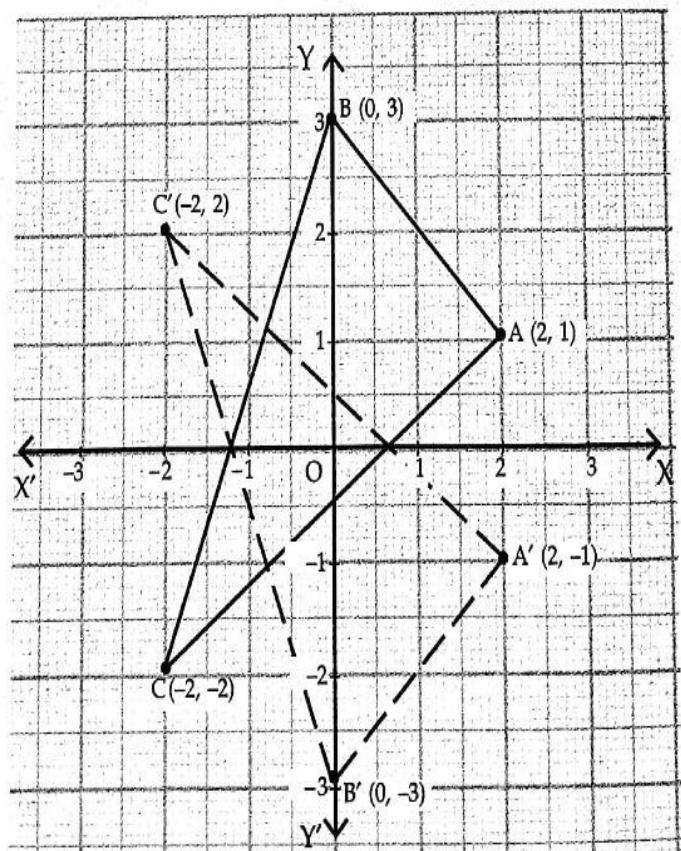


Example 3 The points A (2, 1), B (0, 3) and C (-2, -2) are the vertices of a triangle.

- (i) Plot the points on the graph paper.
- (ii) Draw the triangle formed by reflecting these points in the x -axis.
- (iii) Are the two triangles congruent?

Solution. Take 1 cm = 1 unit on both axes.

- (i) Plot the points A(2, 1), B(0, 3) and C(-2, -2) as shown in the adjoining diagram.
- (ii) The points A' (2, -1), B' (0, -3) and C'(-2, 2) are the reflections of the points A, B and C respectively in the x -axis. The triangle formed by the points A', B' and C' has been shown in the diagram by dotted lines.
- (iii) The two triangles ABC and A'B'C' are congruent (measure the distances and check it).



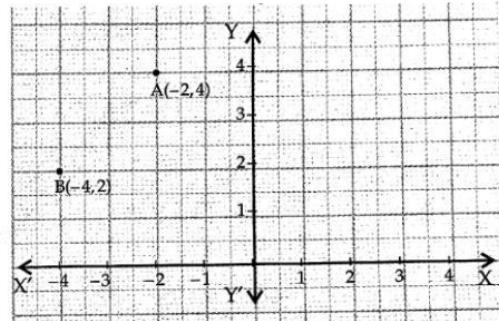
Home Work-

- 1** The point $(-3, 0)$ on reflection in a line is mapped as $(3, 0)$ and the point $(2, -3)$ on reflection in the same line is mapped as $(-2, -3)$.

- (i) Name the mirror line.
(ii) Write the coordinates of the image of $(-3, -4)$ in the mirror line.

- 2** A $(-2, 4)$ and B $(-4, 2)$ are reflected in the y -axis. If A' and B' are images of A and B respectively, find

- (i) the coordinates of A' and B'.
(ii) Assign special name to quad. AA'B'B.
(iii) State whether $AB' = BA'$.



- 3** Use graph paper for this question.

- (i) The point P $(2, -4)$ is reflected about the line $x = 0$ to get the image Q. Find the coordinates of Q.
(ii) Point Q is reflected about the line $y = 0$ to get the image R. Find the coordinates of R.
(iii) Name the figure PQR.
(iv) Find the area of the figure PQR.

- 4** Use graph paper for this question. The point P $(5, 3)$ was reflected in the origin to get the image P'.

- (i) Write down the coordinates of P'.
(ii) If M is the foot of perpendicular from P to the x -axis, find the coordinates of M.
(iii) If N is the foot of the perpendicular from P' to the x -axis, find the coordinates of N.
(iv) Name the figure PMP'N.
(v) Find the area of the figure PMP'N.

- 5** Using a graph paper, plot the points A $(6, 4)$ and B $(0, 4)$.

- (i) Reflect A and B in the origin to get images A' and B'.
(ii) Write the coordinates of A' and B'.