ST. ANTHONY'S SR. SEC. SCHOOL

SUMMER HOLIDAY HOMEWORK (2025)

ENGLISH

CLASS IX

SUBJECT - ENGLISH LANGUAGE AND LITERATURE-184

A. READING:

1. Read all chapters done in class from the BEEHIVE and MOMENTS book.

2. Read a novel of your choice for summary discuss in class.

B. WRITING:

1. Write a diary entry about a memorable experience from your summer vacation and the new things you tried or learnt recently.

2. Complete all the written work given from the chapters in 'BEEHIVE' and 'MOMENTS'.

3. Complete Units 1-3 in the English Workbook.

C. LISTENING:

1. Listen to the English news channels daily to improve pronunciation, speaking with the correct intonation and expression.

2. Watch English movies such as – Mufasa Lion King, Inside Out, Charlie and the Chocolate Factory, Madagascar Dumbo.

D. SPEAKING:

Learn to recite with correct pronunciation two poems- THE ROAD NOT TAKEN and WIND.

GOD BLESS YOU ALL AND YOUR FAMILY.

सेंट एंथनी सीनियर सेकेंडरी स्कूल

ग्रीष्मकालीन अवकाश कार्य

(2025-26)

कक्षा- 9

विषय - हिंदी

* प्रतिदिन हिंदी का समाचार-पत्र पढ़िए ।
* साहित्य में पढ़ाए गए सभी पाठों को पुनः पढ़िए एवं उनके प्रश्न-अभ्यास को लिख-लिखकर याद कीजिए ।
* व्याकरण में पढ़ाए गए सभी पाठों को पुनः पढ़िए एवं उनका अभ्यास कार्य पूरा कीजिए ।
*हिंदी व्याकरण की अभ्यास पुस्तिका में पढ़ाए गए पाठों का अभ्यास कार्य पूरा कीजिए।
* गतिविधि -

पोस्टर बनाओ –

परियोजना कार्य-(A4-size sheet में करना है)

1. ' प्लास्टिक को ना कहो' विषय पर पोस्टर तैयार करो।

ST. ANTHONY'S SR. SEC. SCHOOL, HAUZ KHAS
SUMMER HOLIDAY HOMEWORK (2025-26)
CLASS IX
MATHEMATICS

INSTRUCTIONS:-

1) **Do the given holiday homework on the coloured A4 size sheets. Each sheet should have a neat border and must be decorated with Delhi and Sikkim related designs.**
2) **Make a beautiful mathematical cover page, which must have your Name, Class and Roll Number.**
3) **Staple all the sheets together and place them in a folder**
4) **Last date of submission: 3 July 2025**

A) SUBJECT ENRICHMENT ACTIVITIES

ACTIVITY 1

OBJECTIVE

To verify the algebraic identity :

$(a+b+c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$

MATERIAL REQUIRED

Hardboard, adhesive, coloured papers, white paper.

METHOD OF CONSTRUCTION

1. Take a hardboard of a convenient size and paste a white paper on it.
2. Cut out a square of side a units from a coloured paper [see Fig. 1].
3. Cut out a square of side b units from a coloured paper [see Fig. 2].
4. Cut out a square of side c units from a coloured paper [see Fig. 3].
5. Cut out two rectangles of dimensions $a \times b$, two rectangles of dimensions $b \times c$ and two rectangles of dimensions $c \times a$ square units from a coloured paper [see Fig. 4].

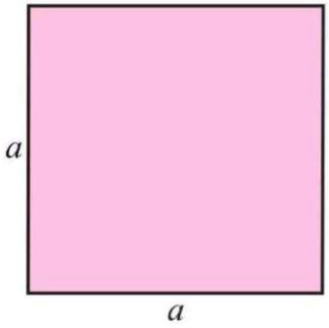


Fig. 1

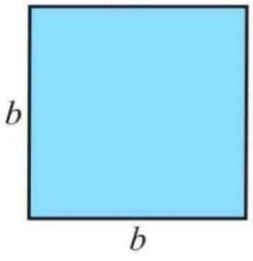


Fig. 2

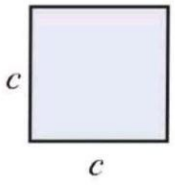


Fig. 3

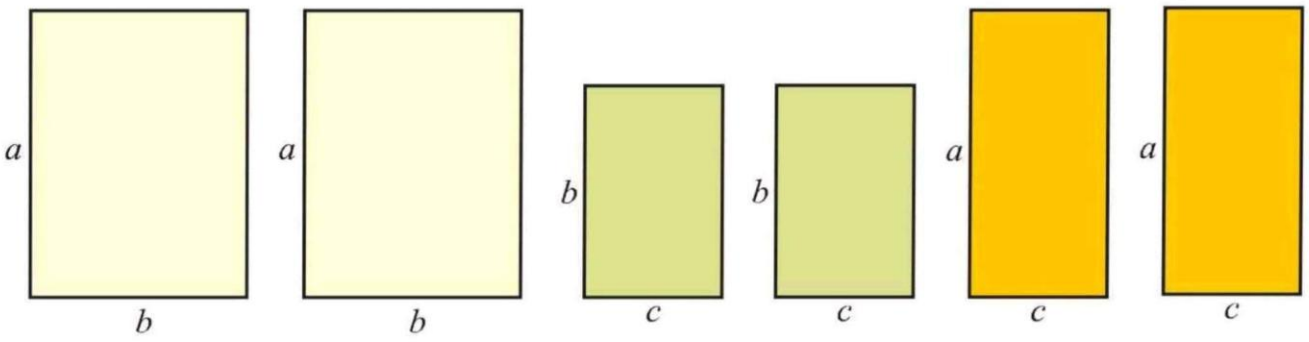


Fig. 4

6. Arrange the squares and rectangles on the hardboard as shown in Fig. 5.

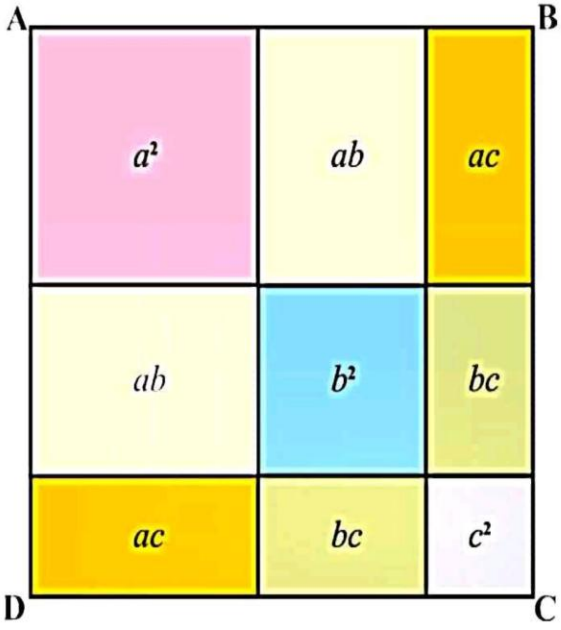


Fig. 5

Demonstration

From the arrangement of squares and rectangles in Fig. 5, a square ABCD is obtained whose side is $(a+b+c)$ units.

Area of square ABCD = $(a+b+c)^2$.

Therefore, $(a+b+c)^2$ = sum of all the squares and rectangles shown in Fig. 1 to Fig. 4.

$= a^2 + ab + ac + ab + b^2 + bc + ac + bc + c^2$

$= a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$

Here, area is in square units.

Observation

On actual measurement:

$a =$ ....., $b =$ ....., $c =$ ..... ,

So, $a^2 =$ ....., $b^2 =$ ....., $c^2 =$ ....., $ab =$ .....,

$bc =$ ....., $ca =$ ....., $2ab =$ ....., $2bc =$ ..... ,

$2ca =$ ....., $a+b+c =$ ....., $(a+b+c)^2 =$ ..... ,

Therefore, $(a+b+c)^2 = a^2 + b^2 + c^2 + 2ab + 2bc + 2ca$

Application

The identity may be used for

1. simiplification/factorisation of algebraic expressions
2. calculating the square of a number expressed as a sum of three convenient numbers.

ACTIVITY 2

OBJECTIVE

To verify exterior angle property of a triangle.

MATERIAL REQUIRED

Hardboard sheet, adhesive, glazed papers, sketch pens/pencils, drawing sheet, geometry box, tracing paper, cutter, etc.

METHOD OF CONSTRUCTION

1. Take a hardboard sheet of a convenient size and paste a white paper on it.
2. Cut out a triangle from a drawing sheet/glazed paper and name it as ΔABC and paste it on the hardboard, as shown in Fig. 1.
3. Produce the side BC of the triangle to a point D as shown in Fig. 2.

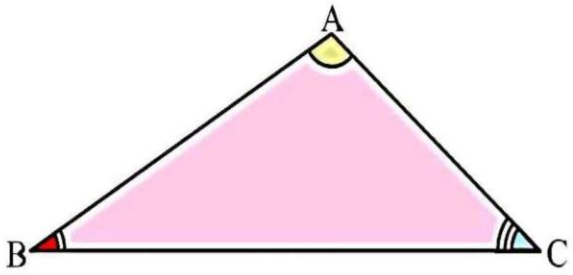


Fig. 1

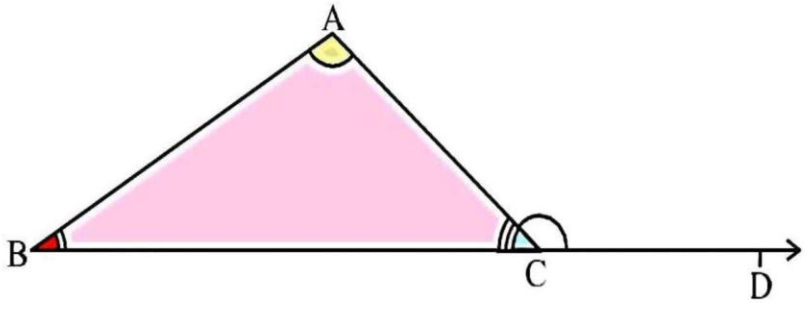


Fig. 2

4. Cut out the angles from the drawing sheet equal to ∠A and ∠B using a tracing paper [see Fig. 3].
5. Arrange the two cutout angles as shown in Fig. 4.

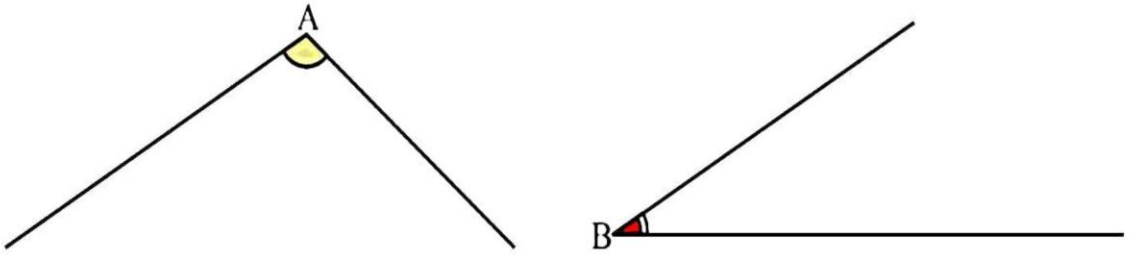


Fig. 3

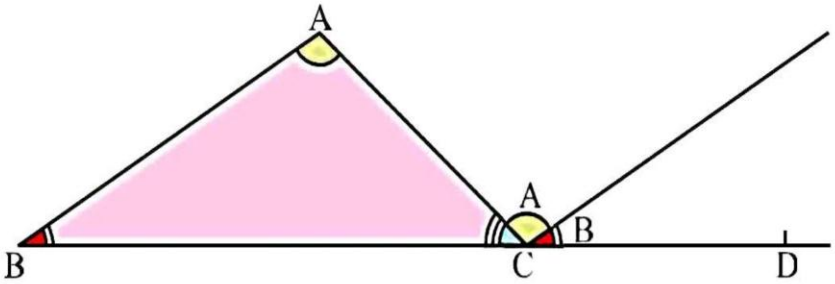


Fig. 4

DEMONSTRATION

∠ACD is an exterior angle.

∠A and ∠B are its two interior opposite angles.

∠A and ∠B in Fig. 4 are adjacent angles.

From the Fig. 4, ∠ACD = ∠A + ∠B.

OBSERVATION

Measure of ∠A= _____, Measure of ∠B = _____,
Sum (∠A + ∠B) = _____, Measure of ∠ACD = _____.

Therefore, ∠ACD = ∠A + ∠B.

APPLICATION

This property is useful in solving many geometrical problems.

ACTIVITY 3

OBJECTIVE

To verify experimentally that the sum of the angles of a quadrilateral is 360°.

MATERIAL REQUIRED

Cardboard, white paper, coloured drawing sheet, cutter, adhesive, geometry box, sketch pens, tracing paper.

METHOD OF CONSTRUCTION

1. Take a rectangular cardboard piece of a convenient size and paste a white paper on it.
2. Cut out a quadrilateral ABCD from a drawing sheet and paste it on the cardboard [see Fig. 1].
3. Make cut-outs of all the four angles of the quadrilateral with the help of a tracing paper [see Fig. 2]

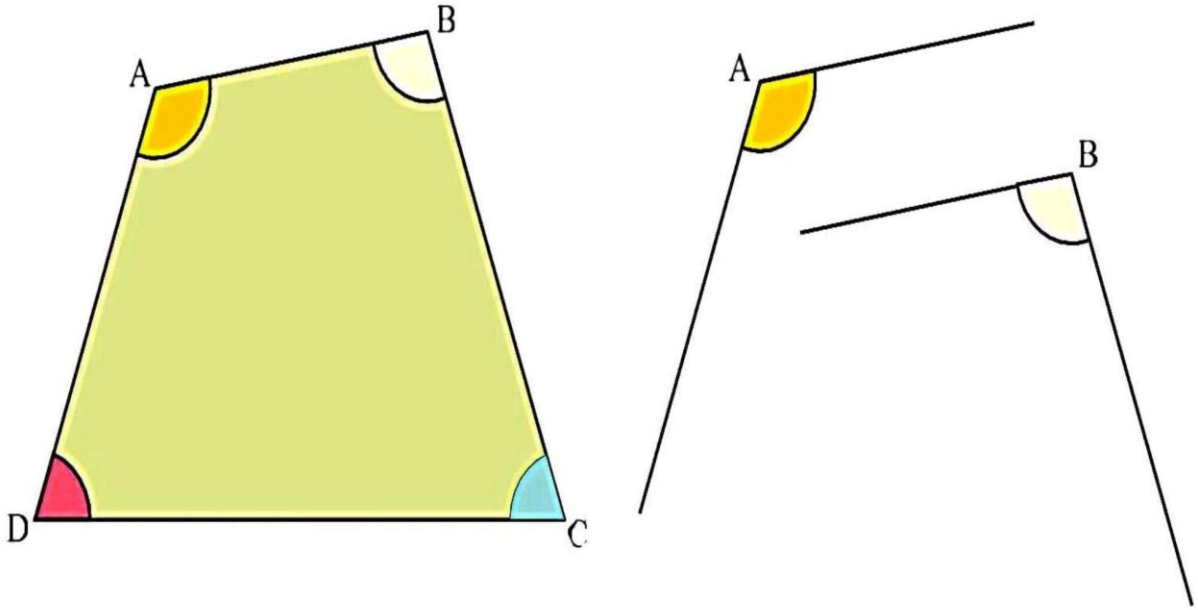


Fig. 1

Fig. 2

4. Arrange the four cut-out angles at a point O as shown in Fig. 3.

DEMONSTRATION

1. The vertex of each cut-out angle coincides at the point O.
2. Such arrangement of cut-outs shows that the sum of the angles of a quadrilateral forms a complete angle and hence is equal to 360º.

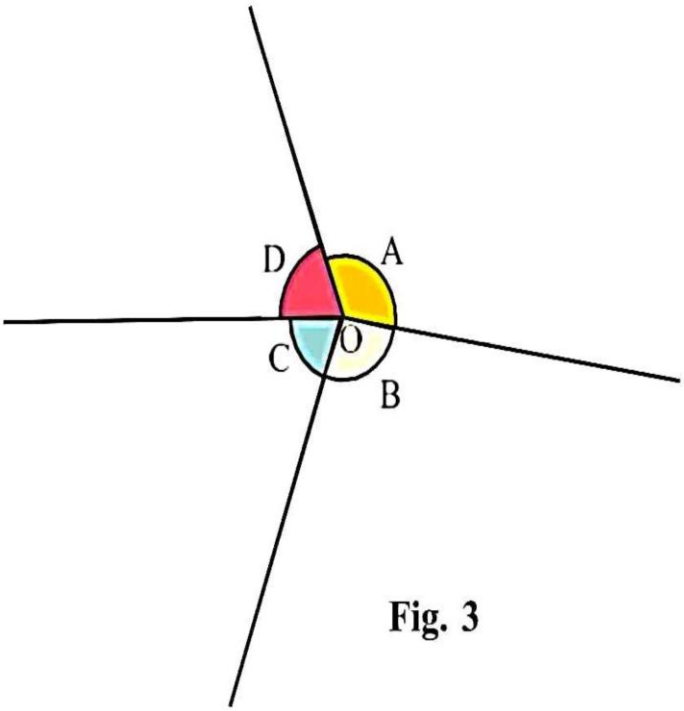


Fig. 3

OBSERVATION

Measure of ∠A = ----------.

Measure of ∠B = ----------.

Measure of ∠C = ----------.

Measure of ∠D = ----------.

Sum [∠A+ ∠B+ ∠C+ ∠D] = ----------.

APPLICATION

This property can be used in solving problems relating to special types of quadrilaterals, such as trapeziums, parallelograms, rhombuses, etc.

ACTIVITY 4

OBJECTIVE

To verify that the opposite angles of a cyclic quadrilateral are supplementary.

MATERIAL REQUIRED

Chart paper, geometry box, scissors, sketch pens, adhesive, transparent sheet.

METHOD OF CONSTRUCTION

1. Take a chart paper and draw a circle of radius on it.
2. In the circle, draw a quadrilateral so that all the four vertices of the quadrilateral lie on the circle. Name the angles and colour them as shown in Fig. 1.
3. Make the cut-outs of the angles as shown in Fig. 2.

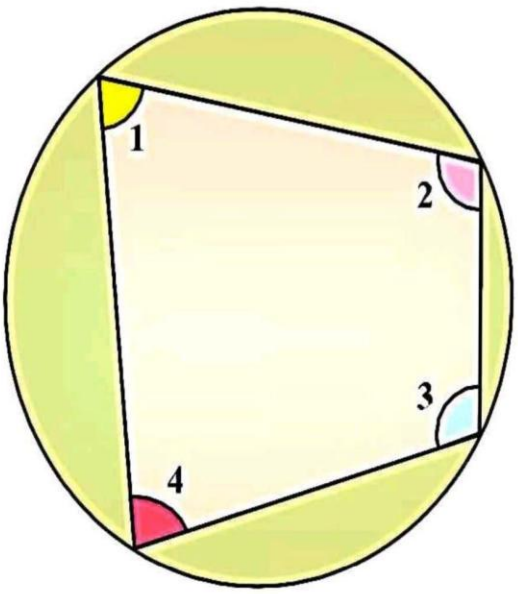


Fig. 1

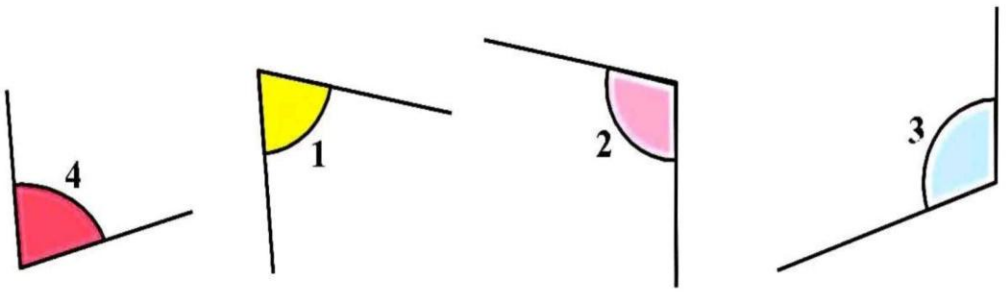


Fig. 2

DEMONSTRATION

Paste cut-outs of the opposite angles $\angle 1$ and $\angle 3$, $\angle 2$ and $\angle 4$ to make straight angles as shown in Fig. 3. Thus $\angle 1 + \angle 3 = 180°$ and $\angle 2 + \angle 4 = 180°$.

OBSERVATION

On actual measurement:

$\angle 1$ = ...; $\angle 2$ = ...; $\angle 3$ = ...; $\angle 4$ = ...

So, $\angle 1 + \angle 3$ = ...; $\angle 2 + \angle 4$ =..... ;

Therefore, sum of each pair of the opposite angles of a cyclic quadrilateral is ..... .

APPLICATION

The concept may be used in solving various problems in geometry.

ACTIVITY 5

Construct a creative square root spiral.

B) Learn all the multiplication tables from 1 to 20.

C) Revise and practice all the chapters covered in the class.

Science Holiday HW Assignment Questions
Class IX

1. It is your favourite shirt that you want to wear to a party. However, it is still damp after washing. Explain the process of evaporation using different methods to dry the damp shirt.
2. Kinetic energy of particles of water in three vessels A, B, and C are EA, EB, and EC respectively and EA > EB > EC. Arrange the temperatures, TA, TB, and TC of water in the three vessels in increasing order.
3. On suffering from fever which will lower down your body temperature, more ice or ice cold water?
4. How will you separate a mixture of naphthalene ball powder and common salt? Draw a neat labelled diagram showing the process.
5. How chromatin, chromatid and chromosomes are related to each other?
6. What is plasmolysis? What happens to plasmolysed cell when it is placed in water?
7. Why does the skin of your finger shrink when you wash clothes for a long time?
8. Why is endocytosis found in animals only?

ST. ANTHONY'S SR. SEC. SCHOOL

SUMMER HOLIDAY HOMEWORK (2025)

SOCIAL SCIENCE

CLASS IX

1. PROJECT- HISTORY: FOREST SOCIETY AND COLONIALISM (15 PAGES MAXIMUM)
2. CASE STUDY- URANIUM MINING AND THE TRIBAL COMMUNITY'S STRUGGLE FOR SURVIVAL IN JADUGODA , INDIA (3 TO 5 PAGES)

ST. ANTHONY'S SR. SEC. SCHOOL, HAUZ KHAS
SUMMER HOLIDAY HOMEWORK(2025-26)
CLASS IX
ARITIFICIAL INTELLIGENCE

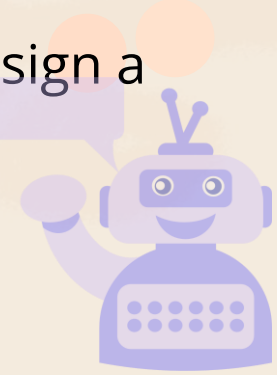
★ ***General Instruction: Students can choose any one topic*** ★

Project Title: AI & Augmented Reality – Exploring AR in Everyday Life

Objective: Students will research AI-powered AR applications, test a few AR tools, and create a presentation or report on their findings.

Steps to Follow:

- Understand the basics of Augmented Reality and how AI enhances it.
- Learn about popular AR applications, such as:Face Filters (Snapchat, Instagram), AR Gaming (Pokémon GO, Minecraft AR), AI in Virtual Shopping (Trying clothes with AR apps)
- Students can explore an AR feature on their smartphone.
- Example Apps: Google Lens (AI-powered object recognition), YouCam Makeup (AI-assisted virtual try-on), Sketch AR (AI helping in digital drawing)
- Take screenshots or short videos showcasing AR effects.
- Write down how AI improves the AR experience (e.g., making filters realistic).
- Use Google Slides, PowerPoint, or Canva to design a project explaining the AI-AR connection.
- Add pictures, research insights, and personal observations.



ST. ANTHONY'S SR. SEC. SCHOOL, HAUZ KHAS
SUMMER HOLIDAY HOMEWORK(2025-26)
CLASS IX
ARTIFICIAL INTELLIGENCE

★ ***General Instruction: Students can choose any one topic*** ★

Project Title: AI in Social Media – How AI Shapes Digital Experiences

Objective: Students will research how AI influences social media, analyze its benefits and drawbacks, and create a presentation or report.

Steps:

- Research how AI improves social media platforms like Instagram, YouTube, and TikTok.
- Key AI-powered features: Recommendation Algorithms (suggests videos, posts), Chatbots & Customer Support (automated responses), AI Content Moderation (removes harmful posts), Deepfake Technology (AI-generated videos/images)
- Observe how AI recommends posts/videos based on likes & searches.
- Compare social media experiences on different platforms (YouTube, Instagram, Twitter).
- List 3 positive impacts (better recommendations, personalized content).
- List 3 negative impacts (privacy issues, bias in AI).
- Research concerns like fake news, misinformation, and AI-driven biases.
- Suggest ways to improve AI ethics in social media.
- Use PowerPoint, Google Slides, or Canva to design a visually engaging project.
- Include images, statistics, and key findings.