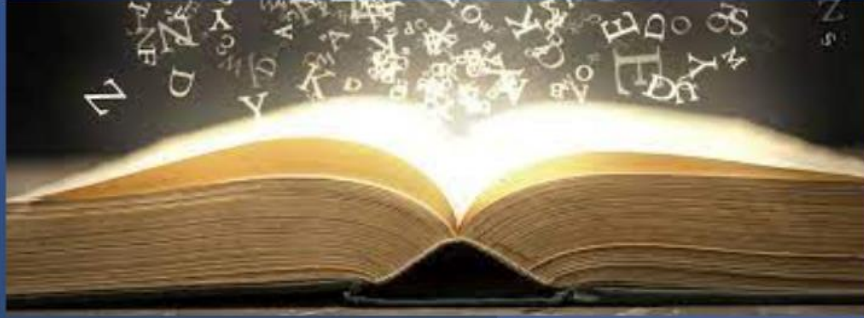
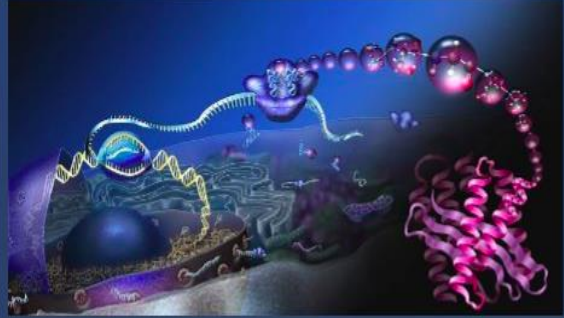


Pythagorean Theorem

Pythagorean Theorem
 $a^2 + b^2 = c^2$

S. Anbalagan,
 Assistant Professor of Mathematics
 Thiagarajar College of Preceptors,
 Madurai



**GANGA
 INTERNATIONAL
 SCHOOL,
 HIRAN KUDNA
 HOLIDAY HOMEWORK
 (2022-23)**



Dear Parents
Warmest Greetings!

Summer vacation forms an integral part of every child's life. As summer rolls around, students ardently wait for the vacation to start to spend time with the loved ones, relax and rejuvenate.

Who wouldn't love to have a fun-filled vacation? Certainly, summer vacation time is exquisite and it also is the best time to learn new things and pursue their hobbies. Therefore, children need to utilize this time more wisely in dynamic learning. As parents it's important for you to keep your kids active and engaged with a variety of fun-engaging games and activities. It will help enrich their skills and keep them entertained during their break.

Reading is one of the best summer-time activities as it helps to improve their reading skills, helps to gain knowledge, increase vocabulary, etc. Summer vacation can be made interesting by going for trips as they give kids chance to explore the world with fresh air, exercise, and observation. Engaging kids in arts and crafts, gardening, watching movies, cooking, learning new skills, joining online courses, helping parents in daily chores, etc. help in the child's growth and development.

How can one ignore studies during summer vacation?

Dear parents, holiday homework provides the perfect opportunity to students to keep their 'intellectual mind' ticking over, and keeps them challenged and stimulated. It develops vital skills such as independent research, enhancing knowledge, etc. which ultimately helps them to prepare for university life. Parents' role in encouraging children to do their holiday task is an undeniably a major one. Therefore, you are expected to render your whole-hearted support to your kids in completing their homework. Thus, summer vacation can prove to be a time of fruitful exuberance as children reap benefits from them if spent wisely and intelligently.

Hope you all enjoy your family time, laughter, and have fabulous memories!
We wish you all a safe and fun summer time!
Happy Summer Vacation!

Regards
Principal
Ganga International School
Hiran Kudna, New Delhi



GANGA INTERNATIONAL SCHOOL, HIRAN KUDNA HOLIDAY HOMEWORK (2022-23) CLASS XII (HUMANITIES)

ENGLISH

General Instructions:

All homework is to be done on A4 size sheets and compiled in a file / folder. Design an attractive cover for your file/ folder. You may use different colour A4 size sheets for different topics.

1. Practise Comprehension Passages (any five) from your BBC Practice Sample Papers.
2. Write Notices on the following: (two from each category)
 - a. Tours b. Sports c. Cultural / Extra- curricular activities
 - d. Lost & Found e. Public Notices
3. Write articles on the following topics (Word-limit 150- 200)
 - a. My Vision of Future India b. Digital Education in India
 - c. Women Safety in India d. Measures and prevention of Covid 19
4. Write Formal letters on the following topics (two of each category)
 - a. Letter to Editor b. Job Application Letter with Resume
5. Read the following chapters of your text book 'Flamingo' and write a brief pictorial summary of each:
 - i. Last Lesson ii. Lost Spring iii. Poem- My Mother at Sixty-Six
6. Read the following chapters of your text book 'Vistas' and write a brief pictorial summary of each:
 - i. The Third level ii. The Tiger King
7. Write 2 articles/poems (beautifully designed) on topics of your choice for the publication in your school magazine.

HISTORY

Students should complete the worksheets of chapter 1, 2 and 3.

2. "A Turning Tide"

The purpose of this Assignment is to familiarize us with your locality, be it a small market near your place your favourite tea stall, any museum, or your favourite pani- *puri* selling uncle. Create a short documentary about 10-12 minutes and introduce us to your world. (by using app Google street view)

3. Students should prepare individual dummy projects of about 30-35 pages for CBSE assessment.

General Instructions:

1. The project should be prepared according to the guidelines already issued in class.
2. The project should include the following sections:
 - **Cover page**- Displaying the topic.
 - **Acknowledgement** – Thanking the people or institution that has helped you in completion of your project.
 - **Certificate**- Mentioning your name and the name of teacher under whose supervision you have completed your work.
 - **Index**- Giving the list of contents with page numbers.
 - **Introduction**- Giving the purpose and importance of a study.
 - **Chapters**- Give a title to each chapter along with details and pictures.
 - **Conclusion**- What do you learn from your study?
 - **Bibliography**- Showing the sources from where you have gathered information.

Present the following in your project report:

- Data/Statistical Analysis/Map work
- Analysis/Explanation and interpretation
- Bibliography Students can use primary as well as secondary sources for the research work.

FEW SUGGESTIVE TOPICS FOR PROJECTS

- The mysteries behind the mound of dead –Mohenjo-Daro
- An In-depth study to understand Spiritual Archaeology in the Sub-Continent
- Buddha's Path to Enlightenment
- Insight and Reflection of Bernier's notions of The Mughal Empire
- An exploratory study to know the women who created history
- "Mahatma Gandhi" – A legendary soul
- To reconstruct the History of Vijayanagar through the Archaeology of Hampi
- The emerald city of Colonial Era –BOMBAY
- Vision of Unity behind the First War of Independence
- Divine Apostle of Guru Nanak Dev
- Help, Humanity and Sacrifices during Partition
- Glimpses inside Mughals Imperials Household
- The process behind the framing of the Indian Constitution
- The 'Brahm Nirupam' of Kabir – A Journey to Ultimate Reality

Note- A summary/synopsis (one page) of the project has to be prepared covering:

- a) The objective statement
- b) Their observations and findings

The project must be neat and well-presented and must be completely hand-written.

* No whiteners to be used or written matter to be crossed out. In case of any mistake, re-do the sheet.

Do not number sheets or write dates unless so instructed by your teacher. Colour illustrations, maps, charts may be hand drawn or printed (if it is relevant for any aspect of your project) are welcome to make them look attractive.

POLITICAL SCIENCE

General Instructions...

1. *All Questions Are Compulsory.....*
2. *Duly Write In Your Note Book.*

1. Discuss the Role of Sardar Patel in the integration of princely states.
2. Prepare a chart of Indian Political Parties (All National and six regional) with the name of their founder, ideologies.
3. Prepare a list of all Prime-Ministers of India (tenure, contributions and famous slogans)
4. Describe the process of merger of princely states (Hyderabad, Manipur, Jammu Kashmir) with India.
5. Describe the India-China War of 1962.
6. Describe India- Pak conflict of 1965, 1971 and 1999.
7. Make a project file on the topic assigned and discussed in the class as per the guidelines of CBSE for practical examination.

ECONOMICS

NATIONAL INCOME ACCOUNTING

1. Answer the following questions.

- (i) Define the term national income
- (ii) What do you mean by factor income and transfer income?
- (iii) Define the term normal residents of a country
- (iv) Define the term domestic Territory of a country
- (v) Domestic product and domestic income are identical concept. Comment
- (vi) Distinguish domestic income and national income
- (vii) Define Gross Domestic Product at MP and its components
- (viii) Define net domestic product at factor cost or NDP AT FC or Domestic product
- (ix). What is GDP deflator
- (x) What is Intermediate good?

2. Distinguish between the following-

- (a) Consumer good and Producer good
- (b) Intermediate good and Final good
- (c) National and domestic concept
- (d) Market Price and Factor cost
- (e) Micro and Macro economics

3. (a) Define nominal and real GDP or GDP at current price and GDP at base price. Which of these two is a better index of economic and social welfare of an economy and why? Explain with the help of an example.

(b) Explain various limitations of GDP as an indicator of economic and social welfare of the people of a country

(c) What is product method of measuring national income explain the steps or process to measure the national income show the product method or value-added method

4. What is expenditure method of measuring national income how national income is measured through the expenditure method explain the entire process all the steps involved?

5. What is the problem of double counting when does this problem arise explain with example also explain how can this problem be avoided

7. State various precautions that need to be taken while measuring national income by income method

8. Give the meaning of factor income to abroad and factor income from abroad. Also give an example of each.

9. Distinguish between Real Gross Domestic Product and Nominal Gross Domestic Product. Which of these is a better index of welfare of the people and why?

10. Giving reason, explain how the following should be treated in the estimation of National Income.

a) Payment of interest by a firm to a bank.

b) Payment of interest by a bank to an individual.

c) Payment of interest by an individual to a bank.

11. Why should the aggregate final expenditure of an economy be equal to the aggregate factor payments? Explain.

MONEY AND BANKING

Q12. Define the following terms:

(i) Money

(ii) Commercial bank

(iii) Central bank

(iv) Supply of money

(v) Double Coincidence of wants

(vi) CC Economy system

(vii) Monetary Policy

(viii) Supplier of Money

(ix) Primary and Derivative deposits

(x) Basic components of supply of money.

(xi) Bank Rate policy

(xii) Repo and Reverse Rate Policy

13. Make a project file on the topic assigned and discussed in the class as per the guidelines of CBSE for practical examination.

MATHEMATICS

1. Make a **chart** on any of the following topics :-

(a) Types of Functions with graphs (b) Trigonometric Functions

(c) Straight Lines (d) Conic Sections

(e) Limits and Derivatives (f) Differentiation

2. Make a power-point presentation of Mathematics on any of the following topics with minimum 25 slides :-

- (a) History of Indian Mathematicians : Aryabhata, Brahmgupta, Varahamihir, Sridhara, Bhaskaracharya, Ramanujan etc., and history of foreign mathematicians such as Cantor, Pythagoras, Thales, Euclid, Leibnitz, Euler, Gauss, Newton, etc.
- (b) Applications of Calculus in daily life.
- (c) Integration of Mathematics and other subjects: Mathematics and Physics, Mathematics and Chemistry, Mathematics and Music, Mathematics and Environment, Mathematics and Arts, Mathematics and Information and Communication Technology.
- (d) Project based on the Fibonacci sequence, their properties and similar pattern found in nature.
- (e) Career opportunities in Mathematics.

3. Collect data from newspapers/internet/news channels etc. and represent the growth of COVID-19 in different parts of INDIA or in different countries by various Statistical Graphs.

Solve the following questions:

4. If $A = \begin{bmatrix} 2 & -1 & 1 \\ -1 & 2 & -1 \\ 1 & -1 & 2 \end{bmatrix}$ and $B = \begin{bmatrix} 3 & 1 & -1 \\ 1 & 3 & 1 \\ -1 & 1 & 3 \end{bmatrix}$ find the product AB and use this result to solve the following system of equations:

$$\begin{aligned} 2x - y + z &= -1 \\ -x + 2y - z &= 4 \\ x - y + 2z &= -3 \end{aligned}$$

5. Using properties of determinants, show that:

(i)
$$\begin{vmatrix} a+x & y & z \\ x & a+y & z \\ x & y & a+z \end{vmatrix} = a^2(a+x+y+z)$$

(ii)
$$\begin{vmatrix} 1 & a & bc \\ 1 & b & ca \\ 1 & c & ab \end{vmatrix} = 0$$

(iii)
$$\begin{vmatrix} x+4 & x & x \\ x & x+4 & x \\ x & x & x+4 \end{vmatrix} = 16(3x+4)$$

(iv)
$$\begin{vmatrix} 1 & x & x^3 \\ 1 & y & y^3 \\ 1 & z & z^3 \end{vmatrix} = (x-y)(y-z)(z-x)(x+y+z)$$

(v)
$$\begin{vmatrix} a+b+c & c & -b \\ -c & b+c+a & -a \\ -b & a & c+a+b \end{vmatrix} = 2(a+b)(b+c)(c+a)$$

(vi) Prove that
$$\begin{vmatrix} 1+a & 1 & 1 \\ 1 & 1+b & 1 \\ 1 & 1 & 1+c \end{vmatrix} = abc(a+1/a+1/b+1/c)$$

$$(vii) \begin{vmatrix} b+c & c+a & a+b \\ c+a & a+b & b+c \\ a+b & b+c & c+a \end{vmatrix} = 2(a+b+c)(ab+bc+ca-a^2-b^2-c^2)$$

6. Solve the following system of equations:

i. $3x + 4y + 7z = 14$, $2x - y + 3z = 4$, $x + 2y - 3z = 0$

ii. $2x - z = 3$, $5x + y = 7$, $y + 3z = -1$

iii. $x + 2y - 3z = 6$, $3x + 2y - 2z = 3$, $2x - y + z = 2$.

iv. $x - y + z = 3$, $2x + y - z = 2$, $-x - 2y + 2z = -1$.

v. $2/x + 3/y + 10/z = 4$, $4/x - 6/y + 5/z = 1$, $6/x + 9/y - 20/z = 2$

7. Construct a 2×3 matrix whose elements in the i th row and j th column are given by:

(i) $\frac{3i-j}{2}$ (ii) $\frac{2i+3j}{2}$ (iii) $\frac{(i-2j)^2}{2}$

8. If $f(x) = x^2 - 4x + 1$, find $f(A)$, when $A = \begin{pmatrix} 2 & 3 \\ 1 & 2 \end{pmatrix}$.

9. Find a matrix X such that $2A + B + X = 0$, where $A = \begin{pmatrix} -1 & 2 \\ 3 & 4 \end{pmatrix}$, and $B = \begin{pmatrix} 3 & -1 \\ 1 & 5 \end{pmatrix}$.

10. If $A = \begin{pmatrix} 3 & -5 \\ -4 & 2 \end{pmatrix}$ Show that $A^2 - 5A - 14I = 0$ and hence find A^{-1} .

APPLIED-MATHEMATICS

1. Make a project on any one of the following:

i) Stock price movement

ii) Risk assessments by insurance firms from data.

iii) Predicting the outcome of an election - exit polls

iv) Predicting mortality of infants.

v) Vehicle registration data- correlating with pollution and the number of accidents.

2. Practical:- Use of spreadsheet.

* Matrix operations using Excel.

3. Practice questions of Algebra and Differentiation.

INFORMATICS PRACTICES

Finalize topic of your class XII Board Project which should be very unique and innovative. Do complete case study of your selected topic and make data flow diagrams and screen shots on your notebook. Analyze and finalize SERIES & DATAFRAMES related to your project.

2. See articles in IT section in newspaper/IT magazines regularly and cut the relevant articles related to IT Field and make a collage on a chart paper.

3. Make a good quality colored chart (most preferably 3 D charts) on any one of the following topic:

- Cloud Computing
- 5G Technology
- Famous IT Personalities
- Latest discoveries in IT Field
- Name of few Interesting software and their uses
- FOSS (concept, examples and effect)
- Robotics
- Collage of famous and relevant quotes related to IT, Computer or technology

4. Create a movie on the topic e-Waste (disasters and its management) to spread awareness about it in the community.

5. Practise SQL commands covered in the class on any online SQL editor, take the screenshots (at least 10), save it on the digital document created on the cloud, and share the link of the document.

6. Practise PANDAS commands to create SERIES & DATAFRAMES covered in the class on any online Python editor, take the screenshots (at least 10), save it on the digital document created on the cloud, and share the link of the document.

HOME SCIENCE

1. Preparation and use of any one teaching aid to communicate socially relevant messages for children/adolescents/ adults in the community.

2. Market survey any five processed foods with their packaging and label information. (PROJECT)

3. In a group of 5 each, make ONE puppet of Sikkim (ART INTEGRATED PROJECT)

PHYSICAL EDUCATION

1. Write the procedure, benefits & contraindications of Pachimottansana, Dhanurasana and Suryabedhan pranayama for preventing the Obesity problem. Also paste the photo of your own for all these asanas.
2. Write the procedure, benefits & contraindications of Katichakrasana, Bhujangasana and Kapalbhathi for preventing the Diabetes problem. Also paste the photo of your own for all these asanas.
3. Write the procedure, benefits & contraindications of Tadasana, Gomukhasana and Anuloma-Viloma for preventing the Asthma problem. Also paste the photo of your own for all these asanas.
4. Write the procedure, benefits & contraindications of Matyasana, Uttanmandukasana and Nadi-shodhana pranayama for preventing the Hypertension problem. Also paste the photo of your own for all these asanas.
5. Find out any two sports personalities from google those who had represented for India in Paralympics and achieved medal for the nation. Share their journey from beginning to now in 300 words.
6. Why the Nutrition is playing very important role for all the fields, either it is in sports or in academics? Explain it with the proper real-life examples.

COMMERCIAL ART

Write a research base note on given below topic with appropriate pictures examples -

1. The Rajasthani and Pahari School of Miniature Painting.
2. The Mughal and Deccan School of Miniature Painting.

Practical Assignment:

Sketching:

1. Make two human and animal figures everyday in your sketchbook.

Posters:

1. Make 2 posters on half imperial size paper by using the poster color. You are free to choose any one social issues promotion and one product promotion related theme.

Illustration:

2. Make 2 Illustrations on A3 size paper and paint it by poster or water color. All Illustrations Should Be In a Semi Realistic Approach. You are free to choose a topic in illustration but these should be relevant to the syllabus.

Happy Summer Holidays.

*Enjoy the summer
with your close ones.*



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