

MAHARSHI PATANJALI VIDYA MANDIR

HOLIDAY HOMEWORK

CLASS 10 SESSION--24-25

SUBJECT - MATHEMATICS

Do in Activity notebook

1. Draw the graph of the following polynomial according to the roll numbers allotted and the questions based on them (on graph sheet)

Roll no. - 1-8 $f(x) = x^2 - x - 6$

Roll no. - 9-16 $f(x) = x^2 + 1$

Roll no. - 17-24 $f(x) = -3x^2 + 2x - 1$

Roll no. - 25-32 $f(x) = 3 + 2x - x^2$

Roll no. - 33-40 $f(x) = x^2 - 4x + 4$

Roll no. 41-till end $f(x) = -4x^2 + 4x - 1$

Ques 1. Geometrically and mathematically state your allotted curve opens in which direction.

Ques 2. State the zeros of your allotted curve geometrically and mathematically.

Ques 3. Mention the coordinates of the zeros if it is in your allotted curve.

Ques 4. Write the coordinates of the vertex of your allotted curve.

Ques 5. Mention the reason of number of zeros mathematically and geometrically only allotted of your curve.

Give a brief report of activity allotted to you.

2. Establish relationship between the zeros and constant coefficient of a three degree polynomial or a Cubic polynomial. Also solve the question based on cubic polynomial. Find the zeros of the polynomial $f(x) = t^3 - 2t^2 - 15t$ by factorization method and verify the relations between the zeros and the coefficients.

3. Write about five Indian Mathematicians and their achievements in activity file. Also paste a photo of them.

Do the following in A4 sheets.

1. Do 15 unique questions from the chapter Real numbers.
2. Do 15 unique questions from the chapter Polynomial.
3. Do 20 unique questions from the chapter Linear equation in two variables.
4. Draw graph of unique solution, no solution and infinitely many solutions by taking random linear equations.

SUBJECT – SCIENCE

BIOLOGY

General instructions-

- * Each student will do the activity individually.
- *Write your-name, class, section and roll no. on A-4 sheet.
- *Give a clear and colourful presentation on the given topics in a **story telling form** on A-4 sheet paper.
- *You can make your work more attractive by adding pictures/diagrams.

- 1. Roll no-1-5** - Ganga action plan.
- 2. Roll no-6- 10**- Traditional water harvesting systems.
- 3. Roll no- 11-15**- Dependency on forest produce (stake holders).
- 4. Roll no-16-20**- People's participation in the management of forest (with any one example).
- 5. Roll no- 21-25**- How Euro-I & Euro-II norms for emission work towards reducing air pollution.
- 6. Roll no- 26-30**- International norms to regulate the emission of carbon dioxide & how can we contribute towards meeting these norms?
- 7. Roll no- 31-35**- Need for sustainable management.
- 8. Roll no - 36- last roll no**- Traditional practices for conservation of nature.

CHEMISTRY

1. Revise the chapter done in the class.
2. Write and balance any 15 chemical equations from everyday life. Some of the examples are given below:
 - A. Rusting
 - B. Combustion
 - C. Photosynthesis
 - D. Digestion of food
 - E. Thermite welding
 - F. Metal extraction
 - G. Acid indigestion
 - H. Carbonic acid in soft drinks decomposes to give Carbon dioxide
 - I. Formation of soap scum when hard water is passed through a water- softener.
3. Complete your assignment work.
4. Complete your Chemistry practical file.

PHYSICS

1. On A4 size paper draw all 10 cases of all types of mirrors, along with their properties and uses.
2. Read the chapter of **ELECTRICITY** from S.Chand.
3. Solve any 20 questions from other sources than your school books in your copy.
4. Make a small model of PERISCOPE using plane mirrors.

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ENGLISH

1. Read the novel 'The Alchemist -by Paulo Coelho' and write the answer of the following question in about 150 words on a file sheet .

The most important lesson in the book the Alchemist is that it is important to follow your dreams and pursue your personal legend. Santiago's journey teaches us that we should never give up on our dreams, no matter how difficult the journey may seem. Write about your dream in about 150 words and how would overcome the obstacles to achieve it

2. Read the novel 'Gora' by - Rabindra Nath Tagore for ASL(assessment of speaking and listening)

SUBJECT – SOCIAL SCIENCE

GEOGRAPHY

General instructions-

- * Each student will do the activity individually.
 - * Make a *PROJECT*(maximum 5-6 pages)
 - * Last date of submission is **15 July 2024**
 - * Topics for the *PROJECT* :-
 - *1.Roll no-1-5* - Consumer awareness
 - *2. Roll no-6- 10*-Social issues
 - *3. Roll no- 11-15*- Sustainable development, need of an hour.
 - *4. Roll no-16-20*- Hydraulic structures in Ancient India.
 - *5. Roll no- 21-25*- Traditional Rainwater Harvesting systems, which are Practiced in different parts of India.
 - *6. Roll no- 26-30*- Sacred Grove- A Wealth of diverse and rare flora and fauna.
 - *7. Roll no- 31- 35*- Community and Conservation
 - *8. Roll no - 36- till last roll no.
- Negative factors that cause fearful depletion of the flora and fauna

NOTE :- It should be hand written and supported by relevant pictures and data. In **Assignment notebook** .

HISTORY/CIVICS

1. State the importance of following dates remember some dates may be important for more than one event.
 - A. 1804
 - B. 1830
 - C. 1848
 - D. 1861
 - E. 1707
2. Find out more about nationalist symbols in the countries outside Europe. For one or two countries, collect examples of pictures, posters music that are symbols of nationalism.
3. Read your textbook carefully and revise each and every topic completed of chapter.1 Nationalism in Europe.
4. Solve the following crossword puzzle :-

GUIDELINES FOR FORMATIVE ASSESSMENT

I. Crossword Puzzle

Solve the following crossword puzzle with the help of clues given below:

CLUES

Across	Down
1. This monarchy was ruling in France at the time of the revolution of 1789	A. Napoleon was defeated in this battle in 1815
2. The name of a patriot of Italy	B. A conference was convened at this place after the defeat of Napoleon Bonaparte in 1815
3. Prime Minister of Italy	C. This person was placed on the throne of France after the revolution of 1830
4. The credit for unifying Germany goes to him	D. The Customs Union, established in 1818 on the initiative of Prussia
5. President of USA	

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SUBJECT: INFORMATION TECHNOLOGY

Note: The answers to all questions should be written neatly and properly only in the Theory Notebook.

- Q. 1. Define a Database? Explain at least 5 advantages of using a Database.
- Q. 2. Explain the different types of Keys in a Database Table showing examples of each in a table.
- Q. 3. Write the steps for creating a table using Table Wizard.
- Q. 4. Describe the various Field Types (Data types) in Open Office Base.
- Q. 5. Consider the Structure of an Employee table as given below:

Field Name	Data Type
Emp_Id	_____
Emp_Name	_____
Emp_Father_Name	_____
Emp_Address	_____
Emp_Salary	_____
Emp_DateOfBirth	_____
Emp_IsMarried	_____
Emp_Designation	_____
Emp_Branch_Name	_____
Emp_Mobile_No	_____

- (i) Determine the appropriate Data types for each of the above mentioned fields in the Employee Table and fill it clearly in the blanks for each field.
- (ii) Also mention which field must be chosen as the Primary Key? Give reasons for your choice.