



L.K. INTERNATIONAL SCHOOL, GHAZIABAD
HOLIDAY HOMEWORK (2025-26)
CLASS XI SCI.

Holidays are about experiences and people, and turning into what you feel like doing at that moment.

It's time to Relax, Reflect and Recharge!

Dear Parents/Students,

Kindly Note—

1. The Summer Break is scheduled from 1st JUNE 2025 to 30th JUNE 2025.

2. Regular classes will commence on 1st JULY 2025 at Usual Time.

Plan out and complete the holiday homework in time. **In addition, revise the syllabus already completed.**

Please complete the work and submit it to the subject teachers in the first week of opening the school. Holiday's homework has been designed with the following objectives: To keep children connected with the syllabus. To engage children constructively. To help students prepare projects in consultation with the subject teacher.

NOTE-- Holiday homework will be part of the subject enrichment activity for the First Term bearing 5 marks in each subject.

Hope to see you soon

Happy summers!

ENGLISH

1. Read any newspaper daily. Pick 2 articles of relevance of social issues. Paste them in separate notebook and write a letter to the editor based on the respective articles.

2. Write an Article in about 150-200 words on ANY ONE topic.

(i) Examination paves way for success (iii) Menace of corruption

3. Write a speech in about 150 words (ANY ONE)

(i) Freedom of press gone too far

(ii) Humour is the best way to resolve conflict

(iii) Effective listening is more important than talking .

4. Prepare a project file on any of the following lessons:

(i) The Address (ii) Silk Road (iii) The Laburnum Top

NOTE-(i) Make separate notebook for holiday home work.

(ii) Project file is a part of practical assessment.

PHYSICS

1. Make a proper scale of given least count
(i) 0.2 cm (ii) 0.5 cm
 2. complete all given practical in physics practical file.
 3. Prepare a project file on units and dimensions:.
(i) write all dimensions 1 to 60 (ii) do 20 1 mark questions from Ch. 1 and 2
- NOTE-(i) Make separate notebook for holiday home work.
(ii) Project file is a part of practical assessment.

CHEMISTRY

List of Investigatory Projects

1. Determination of the rate of evaporation of different liquids- Abhinav
2. Study the acidity in different samples of tea leaves-Shivang
3. Green chemistry-Biodiesel and Biopetrol- Trivansh
4. Study of content of ascorbic acid in citrus fruits- Yuvraj
5. Study of diffusion of solids in liquids- Himanshu
6. Study of sterilization of water by using bleaching powder- Asir
7. Measuring the amount of acetic acid in vinegar- Manshubhi
8. Investigation of the foaming capacity of different washing soaps- Lokesh
9. Study the effect of acids and bases on the tensile strength of fibres-Nandini
10. Analysis of vegetable and fruit juices-Vaibhavi
11. Study on the presence of carbohydrates, proteins and fats in different food stuffs- Divyanshi
12. Measuring solubility of saturated solutions-Shraddha
13. Spectroscopy and its applications-Afsheen
14. Chromatography and its applications- Anshika
15. Study the effects of acids and bases on the tensile strength of fibres – Anushka
16. Study the methods of purification of water- Vansh yadav
17. Investigatory project on analysis of hardness of water -Kanishka
18. Silicones and silicates- Abhishek Kumar
19. Checking bacterial contamination in drinking water by testing sulphide ion-Pranjul singh
20. Study the presence of iron ,fluoride, chloride ions in drinking water.-Pari sharma
21. Carcinogenic hydrocarbons-Shourya pathak
22. To study purification method using sublimation-Paras nagar
23. Applications of green chemistry -Kritika khutail

BIOLOGY

- 1) Do complete notes of ch-1 and 2.
- 2) Find 10 Questions from each Chapter and do them in Biology's notebook
- 3) Read Ch- 3 and 4.
- 4) Prepare a project on the effects of chemical fertilizers and manures/ the study of probiotics/ or the impact of antibiotics on microorganisms/or the effects of green tea on oral bacteria.

MATHEMATICS

MATHEMATICS- Learn all the formulae given below

a. $\sin^2\theta + \cos^2\theta = 1$; $-1 \leq \sin\theta \leq 1$; $-1 \leq \cos\theta \leq 1$ for all $\theta \in R$		
b. $\sec^2\theta - \tan^2\theta = 1$; $ \sec\theta \geq 1$ for all $\theta \in R$		
c. $\operatorname{cosec}^2\theta - \cot^2\theta = 1$; $ \operatorname{cosec}\theta \geq 1$ for all $\theta \in R$		
1. $\sin\left(\frac{\pi}{2} - \theta\right) = \cos\theta$	2. $\cos\left(\frac{\pi}{2} - \theta\right) = \sin\theta$	3. $\tan\left(\frac{\pi}{2} - \theta\right) = \cot\theta$
4. $\cot\left(\frac{\pi}{2} - \theta\right) = \tan\theta$	5. $\sec\left(\frac{\pi}{2} - \theta\right) = \operatorname{cosec}\theta$	6. $\operatorname{cosec}\left(\frac{\pi}{2} - \theta\right) = \sec\theta$
7. $\sin\left(\frac{\pi}{2} + \theta\right) = \cos\theta$	8. $\cos\left(\frac{\pi}{2} + \theta\right) = -\sin\theta$	9. $\tan\left(\frac{\pi}{2} + \theta\right) = -\cot\theta$
10. $\cot\left(\frac{\pi}{2} + \theta\right) = -\tan\theta$	11. $\sec\left(\frac{\pi}{2} + \theta\right) = -\operatorname{cosec}\theta$	12. $\operatorname{cosec}\left(\frac{\pi}{2} + \theta\right) = \sec\theta$
13. $\sin(\pi - \theta) = \sin\theta$	14. $\cos(\pi - \theta) = -\cos\theta$	15. $\tan(\pi - \theta) = -\tan\theta$
16. $\cot(\pi - \theta) = -\cot\theta$	17. $\sec(\pi - \theta) = -\sec\theta$	18. $\operatorname{cosec}(\pi - \theta) = \operatorname{cosec}\theta$
19. $\sin(\pi + \theta) = -\sin\theta$	20. $\cos(\pi + \theta) = -\cos\theta$	21. $\tan(\pi + \theta) = \tan\theta$
22. $\cot(\pi + \theta) = \cot\theta$	23. $\sec(\pi + \theta) = -\sec\theta$	24. $\operatorname{cosec}(\pi + \theta) = -\operatorname{cosec}\theta$
25. $\sin\left(\frac{3\pi}{2} - \theta\right) = -\cos\theta$	26. $\cos\left(\frac{3\pi}{2} - \theta\right) = -\sin\theta$	27. $\tan\left(\frac{3\pi}{2} - \theta\right) = \cot\theta$
28. $\cot\left(\frac{3\pi}{2} - \theta\right) = \tan\theta$	29. $\sec\left(\frac{3\pi}{2} - \theta\right) = -\operatorname{cosec}\theta$	30. $\operatorname{cosec}\left(\frac{3\pi}{2} - \theta\right) = -\sec\theta$
31. $\sin\left(\frac{3\pi}{2} + \theta\right) = -\cos\theta$	32. $\cos\left(\frac{3\pi}{2} + \theta\right) = \sin\theta$	33. $\tan\left(\frac{3\pi}{2} + \theta\right) = -\cot\theta$
34. $\cot\left(\frac{3\pi}{2} + \theta\right) = -\tan\theta$	35. $\sec\left(\frac{3\pi}{2} + \theta\right) = \operatorname{cosec}\theta$	36. $\operatorname{cosec}\left(\frac{3\pi}{2} + \theta\right) = -\sec\theta$
37. $\sin(2\pi - \theta) = -\sin\theta$	38. $\cos(2\pi - \theta) = \cos\theta$	39. $\tan(2\pi - \theta) = -\tan\theta$
40. $\cot(2\pi - \theta) = -\cot\theta$	41. $\sec(2\pi - \theta) = \sec\theta$	42. $\operatorname{cosec}(2\pi - \theta) = -\operatorname{cosec}\theta$
43. $\sin(2\pi + \theta) = \sin\theta$	44. $\cos(2\pi + \theta) = \cos\theta$	45. $\tan(2\pi + \theta) = \tan\theta$
46. $\cot(2\pi + \theta) = \cot\theta$	47. $\sec(2\pi + \theta) = \sec\theta$	48. $\operatorname{cosec}(2\pi + \theta) = \operatorname{cosec}\theta$
1. $\sin(A + B) = \sin A \cos B + \cos A \sin B$	2. $\sin(A - B) = \sin A \cos B - \cos A \sin B$	
3. $\cos(A + B) = \cos A \cos B - \sin A \sin B$	4. $\cos(A - B) = \cos A \cos B + \sin A \sin B$	
5. $\tan(A + B) = \frac{\tan A + \tan B}{1 - \tan A \tan B}$	6. $\tan(A - B) = \frac{\tan A - \tan B}{1 + \tan A \tan B}$	
7. $\cot(A + B) = \frac{\cot B \cot A - 1}{\cot B + \cot A}$	8. $\cot(A - B) = \frac{\cot B \cot A + 1}{\cot B - \cot A}$	
1. $\sin 2x = 2 \sin x \cos x$	2. $\sin x = 2 \sin \frac{x}{2} \cos \frac{x}{2}$	3. $\sin 2x = \frac{2 \tan x}{1 + \tan^2 x}$
4. $\cos 2x = \cos^2 x - \sin^2 x$	5. $\cos 2x = 2 \cos^2 x - 1$	6. $\cos 2x = 1 - 2 \sin^2 x$
7. $\cos 2x = \frac{1 - \tan^2 x}{1 + \tan^2 x}$	8. $2 \cos^2 \frac{x}{2} = 1 + \cos x$	9. $2 \sin^2 \frac{x}{2} = 1 - \cos x$
10. $\tan 2x = \frac{2 \tan x}{1 - \tan^2 x}$	11. $\tan x = \frac{2 \tan \frac{x}{2}}{1 - \tan^2 \frac{x}{2}}$	12. $\tan 3x = \frac{3 \tan x - \tan^3 x}{1 - 3 \tan^2 x}$
13. $\sin 3x = 3 \sin x - 4 \sin^3 x$	14. $\cos 3x = 4 \cos^3 x - 3 \cos x$	
On adding and subtracting $\sin(A + B)$, $\sin(A - B)$ and $\cos(A + B)$, $\cos(A - B)$		
1. $2 \sin A \cos B = \sin(A + B) + \sin(A - B)$	2. $2 \cos A \sin B = \sin(A + B) - \sin(A - B)$	
3. $2 \cos A \cos B = \cos(A + B) + \cos(A - B)$	4. $2 \sin A \sin B = \cos(A - B) - \cos(A + B)$	
In identities $2 \sin A \cos B$, $2 \cos A \sin B$, $2 \cos A \cos B$ and $2 \sin A \sin B$		
Putting $A + B = C$, $A - B = D$, therefore $A = \frac{C+D}{2}$ and $B = \frac{C-D}{2}$		
1. $\sin C + \sin D = 2 \sin \frac{C+D}{2} \cos \frac{C-D}{2}$	2. $\sin C - \sin D = 2 \cos \frac{C+D}{2} \sin \frac{C-D}{2}$	
3. $\cos C + \cos D = 2 \cos \frac{C+D}{2} \cos \frac{C-D}{2}$	4. $\cos C - \cos D = -2 \sin \frac{C+D}{2} \sin \frac{C-D}{2}$	

HOME SCIENCE

1. List and discuss 4-5 areas of agreement and disagreement with:

- Mother
- Father
- Siblings/ Friends

2. a) Record your one day's activities relating to time use and work

b) Prepare a time plan for yourself

PHYSICAL EDUCATION

1. Fitness tests administration. (SAI Khelo India Test)

2. Anyone IOA Recognized sport/Game of Choice. Labelled diagram of Field and Equipment.

Also mention its Rules, Terminologies, and skills