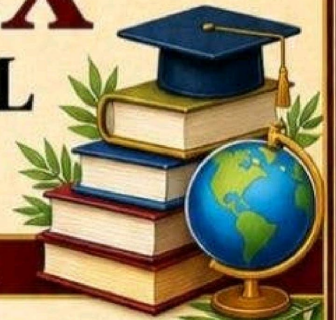




# NORTH-EX<sup>®</sup> PUBLIC SCHOOL — DELHI —



Established 1999 | CBSE Curriculum | Holistic Development



# SUMMER HOLIDAY HOMEWORK

Session 2026–2027



Student Name : \_\_\_\_\_



Class : \_\_\_\_\_



Section : \_\_\_\_\_



Class Teacher : \_\_\_\_\_



*Explore, Learn & Grow this Summer!*



## OUR THREE BRANCHES - ROHINI, DELHI

### SECTOR-38, ROHINI



Spacious campus with modern infrastructure & senior secondary facilities.

### SECTOR-3, ROHINI



Recognised branch with strong academic foundation & disciplined environment.

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## OUR FACILITIES



SMART  
DIGITAL  
CLASSROOMS



WELL EQUIPPED  
SCIENCE  
LABS



COMPUTER &  
IT LABS



LIBRARY &  
RESOURCE  
CENTRE



SPORTS &  
OUTDOOR  
ACTIVITIES



CO-CURRICULAR  
ACTIVITIES  
(ART, MUSIC, DANCE)



SAFE & SECURE  
CAMPUS  
(CCTV)



Complete your work neatly and submit on time.



**NORTH-EX PUBLIC SCHOOL**  
(Senior Secondary, Affiliated To CBSE)  
School Block, Jain Nagar, Sector-38, Rohini, Delhi – 81  
SUMMER HOLIDAY HOMEWORK, 2026-27  
CLASS –ENLIGHTENED XII

**General Instructions:**

- Learn and revise the syllabus of Periodic Test -1.
- Do your project work neatly.
- Holiday homework should be done in the test register or according to the requirement mentioned.
- Do your work as per the elective subjects

**WEEK – 1**

**MATHEMATICS**

1. Solve the equations

$$2yz - 3xz + 3xy = 10xyz$$

$$yz - xz + xy = 10xyz$$

$$3yz - xz + 2xy = 13xyz$$

2. If  $x + y + z = 100$ , then find the value of

$$x^2 + y^2 + z^2 - 2xy - 2yz - 2zx$$

**BUSINESS STUDIES**

Q1. Mr. X, the director of a company many times get involved in activities like procurement of raw material, production and dispatch of goods, employee discipline etc.

- (a) Name the level of management Mr. X belongs to.
- (b) Do you think he must be involved in such activities? Give reason.
- (c) Give two important functions, Mr. X must perform?

Q2. The marketing manager of Alpha Ltd. fixed the target for all his sales executives and gave them all the possible authorities to achieve it. They were asked to submit to him their performance report at the end of the month. All of them did the same. On the receipt of report, the expected and actual results of sales executives were compared, on this basis future course of

action was decided. The sales Executive also wrote in their report what the expectations of the customers from the company were. Majority of them had written that they wanted the co. to cooperate in the construction of Dharmasala going on in the city. The marketing manager placed this demand before the Board of Directors. This was happily accepted.

- (a) Identify the functions of management described in above paragraph by quoting relevant

lines.

(b) Which 2 values are given to society?

(c) Which objective is being highlighted here?

### ACCOUNTANCY

Q1. Difference between Fixed Capital Account & Fluctuating Capital Account

Q2. Calculate interest on drawing of Vimal if the withdrew Rs. 48000 Quarter withdrawn evenly

(i) at beginning of each Quarter (ii) in the middle of each of at end (iii) Quarter. Rate of interest is

10% p.a.

### ECONOMICS

Q1. What is Nominal Gross Domestic Product?

Q2. What is meant by Real Gross Domestic Product?

### PHYSICAL EDUCATION

1. What is Planning? Explain the objectives of planning in sports in detail.

2. Enlist the committees for organising sports events and explain them in detail.

### ENGLISH

1. Your school is organizing a workshop on Cyber Safety for students. Draft a notice inviting students to attend the workshop.

2. Think back over your past seven days of your summer vacation.

In your best **cursive handwriting**, write a diary entry (approx. 120–150 words) **week wise** describing how you spent your week.

**Include the following:**

- Where did you go and what were your main activities?
- Describe one thing you saw, heard, or felt that made the week memorable.
- How does these moments change the way you look back on your week?"

## WEEK – 2

### MATHEMATICS

1. Prove that  $\tan^{-1}\left(\frac{\sqrt{1+x^2}+\sqrt{1-x^2}}{\sqrt{1+x^2}-\sqrt{1-x^2}}\right) = \frac{\pi}{4} - \frac{1}{2}\cos^{-1}x^2$ .
2. Express  $\begin{bmatrix} 2 & 5 & 6 \\ 1 & 2 & 3 \\ -1 & 0 & 6 \end{bmatrix}$  as a sum of symmetric and skew symmetric matrix.

### BUSINESS STUDIES

- Q1. Management is multi-dimensional'. Explain?
- Q2. How is management all pervasive?

### ACCOUNTANCY

- Q1. How will you show the following in case the capitals are?
  - i) Fixed and ii) Fluctuating
    - a) Additional capital introduced
    - b) Drawings
    - c) Withdrawal of capital
    - d) Interest on capital and
    - e) Interest on loan by partners?
- Q2. If the partners capital accounts are fixed, where will you record the following items:
  - a) Salary to partners
  - b) Drawing by a partners
  - c) Interest on capital and
  - d) Share of profit earned bya partner?

### ECONOMICS

- Q1. What is transfer payment?
- Q2. What are externalities? Give an example of a positive externality and its impact on welfare of the people.

### PHYSICAL EDUCATION

1. What is tournament? Explain the importance of tournament in detail.
2. Define and classify 'Fixture'. Draw a league fixture for 16 teams.
3. Write down the method of preparing fixture in knock-

### ENGLISH

1. You have lost your library card on the school premises. Write a notice for the school notice board.
2. Think back over your past seven days of your summer vacation.

In your best **cursive handwriting**, write a diary entry (approx. 120–150 words) describing how you spent your week.

### WEEK – 3

#### MATHEMATICS

1. Let L be the set of all lines in a plane and R be a relation on L defined by  $l_1 R l_2$  iff  $l_1$  is perpendicular to  $l_2$ , then R is equivalence relation or not.
2. Find the range of  $\sec^{-1}(2x - 1)$ .

#### BUSINESS STUDIES

Q1. Identify the nature of management when it is practiced as personal application of existing knowledge to achieve desired results.

Q2. Mr. Kunal is working as the Finance Manager of XYZ Ltd. At what level of management is he working? State any two functions being performed by him?.

#### ACCOUNTANCY

Q1. A business has earned average profits of Rs 1,00,000 during the last few years and the normal rate of return in a similar business is 10%. Find out the value of goodwill by

a) Capitalisation of super profit method.

b) Super profit method, if the goodwill is valued at 3 years' purchase of super profit.

The assets of the business were Rs 10,00,000 and its external liabilities Rs 1,80,000.

Q2. The profits of a firm for the last five years were:

Year	2011	2012	2013	2014	2015
Profits (Rs.)	45,000	50,000	52,000	65,000	85,000

Calculate the value of goodwill on the basis of two years of purchase of weighted average profits, the weights to be used are 2011-1, 2012-2, 2013-3, 2014-4 and 2015-5.

#### ECONOMICS

Q1. Explain three expenditure methods estimating National Income.

Q2. Explain how 'distribution of Gross Domestic Product' is a limitation in taking Gross Domestic Product as an index of welfare.

### PHYSICAL EDUCATION

1. Mention the causes, precautions and remedies of bow legs.
2. Suggest physical activities as corrective measures for flat foot and Lordosis.

### ENGLISH

1. As the Secretary of the Music Club of your school, draft a notice inviting students to audition for the Annual Music Competition.
2. Think back over your past seven days of your summer vacation.

In your best **cursive handwriting**, write a diary entry (approx. 120–150 words), describing how you spent your week.

## WEEK – 4

### MATHEMATICS

1. Determine the product of  $\begin{bmatrix} -4 & 4 & 4 \\ -7 & 1 & 3 \\ 5 & -3 & -1 \end{bmatrix} \begin{bmatrix} 1 & -1 & 1 \\ 1 & -2 & -2 \\ 2 & 1 & 3 \end{bmatrix}$  and then use to solve the system of equations

$$x - y + z = 4$$

$$x - 2y - 2z = 9$$

$$2x + y + 3z = 1$$

2. If  $A = \begin{bmatrix} 1 & -1 & 1 \\ 2 & 1 & -3 \\ 1 & 1 & 1 \end{bmatrix}$  find  $A^{-1}$ . Using  $A^{-1}$  solve the system of equation

$$x + 2y + z = 4$$

$$-x + y + z = 0$$

$$x - 3y + z = 2$$

### BUSINESS STUDIES

Q1. What is mean by Co-ordination? Explain how does coordination 'integrates group efforts' and 'ensures unity of action'.

Q2. Explain the following principles of Fayol with the help of one example of each.

a) Division of work

b) Unity of direction

### ACCOUNTANCY

Q1. Ram & Sham are partners sharing profits & losses in ratio of 3:2. Ram being non-working partner contributes Rs. 20,00,000 as his capital & Shyam being a working parties, gets a salary of Rs. 8000 per month. As per partnership deed interest is paid @ 8% p.a. & salary is allowed. Profits before providing that for year ending 31st March 2015 were Rs. 80,000. Show the distribution of profits.

Q2. Difference between profit and loss account and profit Loss appropriation account.

### ECONOMICS

Q1. How can externalities be a limitation of using Gross Domestic Product as an index of welfare?

Q2. Give the meaning of factor income to abroad and factor income from abroad. Also give an example of each.

### PHYSICAL EDUCATION

1. Explain the causes, precautions and remedies of knock knees.

2. Explain scoliosis, its causes and suggest its preventive and remedial measures.

## ENGLISH

1. Write a letter to the editor expressing your concern over the rising cases of cybercrime.
2. Write an article on "The Role of Technology in Modern Education." 2. Write an article on "Fitness and Healthy Living in the Modern Age."
3. Think back over your past seven days of your summer vacation.

In your best **cursive handwriting**, write a diary entry (approx. 120–150 words) describing how you spent your week.

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## WEEK – 5

### MATHEMATICS

1. Show that function  $f : \mathbb{R} \rightarrow \mathbb{R}$ , defined by  $f(x) = \frac{x}{x^2+1}$  is neither one –one nor onto.
2. If  $A^2 = I$  then find  $(A + I)^3 + (A - I)^3 - 7A$
3. Do Lab Activities :

Activity1. To verify for the Equivalent relation:

a) Let  $L$  be the set of all lines in a plane and  $R$  be a relation on  $L$  defined by  $l_1 R l_2$  iff  $l_1$  is perpendicular to  $l_2$ .

b) Let  $L$  be the set of all lines in a plane and  $R$  be a relation on  $L$  defined by  $l_1 R l_2$  iff  $l_1$  is parallel to  $l_2$ .

Activity:2 To demonstrate the concept of One One and Onto functions.

### BUSINESS STUDIES

Q1. Why did Taylor develop the technique of different piece wage system?

Q2.(Project work)

Student are supposed to select one unit out of 4 and you are to require only one project from the selected unit.

Topic1 (Roll. No. 1,5,9,13) -Elements of Business Environment

Topic2(Roll.no.2, 6,10)

-Principles of Management

Topic3(Roll.no.3, 7,11) -

Stock Exchange

Topic4(Roll. no. 4,8,12,) -Marketing

### ACCOUNTANCY

Q1. V and M are partners . V's capital is ₹100000 and M's capital is ₹60000. Interest on capital is

payable@6%.V is to get salary of ₹3000 per month. Net profit for the year is ₹ 80000.Prepare

Profit & loss Appropriation Account.

Q2. (Project work)

One Specific project based on financial statement analysis of a company covering any two aspects from the following:

- I) comparative and common size financial statement.
- ii) Accounting Ratio
- iii) Segment Reports
- Iv) Cash flow statement.

### **ECONOMICS**

Q1. Distinguish between domestic income and national income. When can domestic product be more than the national product?

Q2. Distinguish between Gross Domestic Product at base year price and Gross Domestic Product at current year price. Which of these is a better index of welfare of the people and why?

Q3. Students are asked to prepare a PROJECT REPORT through RESEARCH WORK on any one (already distributed) of the following topic:

1. Micro and Small Scale Industries
2. Food Supply Channel in India
3. Contemporary Employment situation in India
4. Disinvestment policy of the government
5. Goods and Services Tax Act and its Impact on GDP
6. Health Expenditure (of any state)
7. Human Development Index
8. Inclusive Growth Strategy
9. Self-help group
10. Trends in Credit availability in India
11. Monetary policy committee and its functions
12. Role of RBI in Control of Credit
13. Government Budget & its Components
14. Trends in budgetary condition of India

15. Exchange Rate determination-Methods and Techniques
16. Currency War-reasons and repercussions
17. Livestock-Backbone of Rural India
18. SarwaSiksha Abhiyan-Cost Ratio Benefits
19. Golden Quadrilateral-Cost ratio benefit
20. Minimum Support Prices
21. Relation between Stock Price Index
22. Waste Management in India-Need of the hour
23. Rain Water Harvesting-a solution to water crises
24. Digital India-Step towards the future

#### PHYSICAL EDUCATION

1. Explain knock knees, its causes, precautions and remedial exercises.
2. Explain the given below topics with diagram.

S. No	Roll. No	topics
1	1-5	Diabetes
2	6-10	Asthma
3	10-15	hypertension
4	16-20	Back pain and Arthritis

#### ENGLISH

1. Write a report for your school magazine about the Swachh Bharat Abhiyan drive carried out in your school.
2. Prepare the topic of your choice for ASL (Assessment of Speaking and Listening) and Prepare your ASL Project file.
3. Think back over your past seven days of your summer vacation.

In your best **cursive handwriting**, write a diary entry (approx. 120–150 words) **week wise** describing how you spent your week.

**PROJECT WORK (Model)**

Subject	Roll. No.	Suggested Topics
Economics	1 to 3	Assets and Liabilities
	4 to 6	Evolution of Money
	7 to 9	Journey of Indian Economy
	10 to 12	Outsourcing
	13 to 15	RBI
Accountancy	1 to 5	ratio analysis interactive model
	6 to 10	cash flow statement model -cash movement
	11 to 13	Issues of over Subscription &pro rata allotment
B.St.	1 to 5	principles of fayol demo model
	6 to 10	Stock Exchange Working Model- live Trading Demo
	11 to 13	Marketing Mix 4 ps Rotating Model
English	1 to 24	Make a project file based on any chapter or poetry from the Book Flamingo and Vistas (Done till now)
Maths	5,6,8,9,11	Do Lab Activities: Activity1. To verify for the Equivalent relation: a) Let L be the set of all lines in a plane and R be a relation on L defined by $l_1 R l_2$ iff $l_1$ is perpendicular to $l_2$ . b) Let L be the set of all lines in a plane and R be a relation on L defined by $l_1 R l_2$ iff $l_1$ is parallel to $l_2$ . Activity:2 To demonstrate the concept of One One and Onto functions.
Phy. Ed.	2,3	Diabetes
	4,7	Asthma
	1.10	hypertension
	12	Back pain
	13	Arthritis