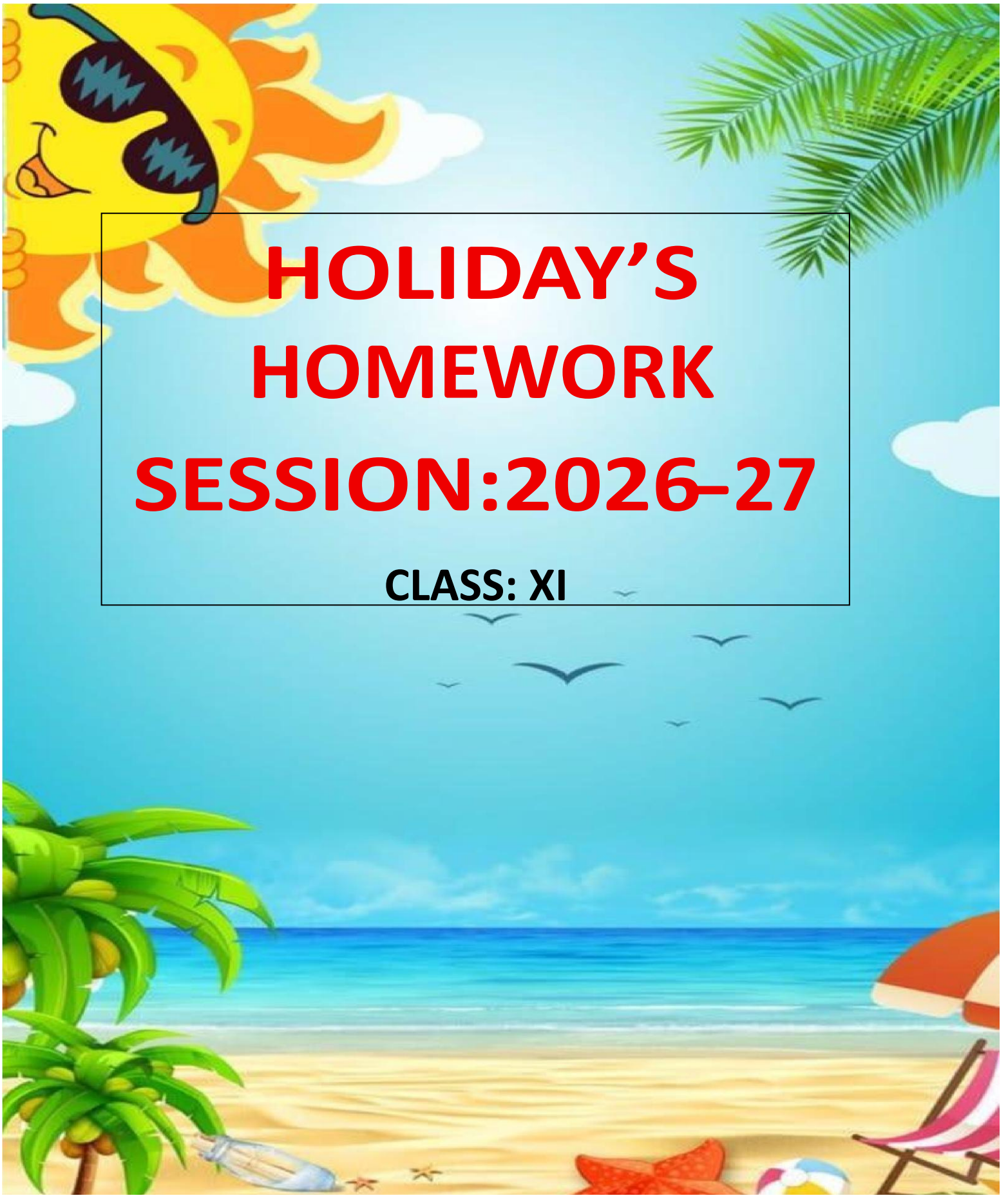
D.A.V CENTENARY PUBLIC SCHOOL, CHANDER NAGAR, GZB



HOLIDAY'S HOMEWORK

SESSION:2026-27

CLASS: XI

D.A.V. CENTENARY PUBLIC SCHOOL, CHANDER NAGAR, GHAZIABAD
HOLIDAY HOME WORK 2026-27
CLASS XI

SUBJECT	DETAILS
ACCOUNTANCY	CHAPTER 6 – ACCOUNTING EQUATION Q.1. TO Q.30 Chapter 3 - Accounting Principles – Pg3.17 HOTS Questions (1-28)
BUSINESS STUDIES	1 Analyse the various forms of business organisations in /around your surrounding. 2 Visit to post office/bank to observe the working of the institutions
MARKETING	Frame 10 case studies related to chapter 1 .
ECONOMICS	STATISTICS – SANDEEP GARG Chapter number-1,2 Name of the chapter -Economics an introduction, Meaning, scope, and importance of statistics Type of questions- Long answer type questions(LAQ) Short answer, type questions(SAQ) Page no and question number- Pg no.-1.14(SAQ) Question no- Q1, 4, 5,8 Pg no-2.17 (SAQ) Question no.-Q1, Q2, Q4, Q6, Q8, Q10
ENGLISH	1. Career Exploration Project Research 3 career options you are interested in. Include: * Required qualification * Skills needed * Salary range * Future scope * Why it suits you Create a career file (8–10 pages). Write a letter for applying that post mentioning your curriculum vitae. 2. Newspaper Analysis Project Read newspaper for 10 days. Collect articles on: * Education * Technology * Environment * Economy * International news Write: * Summary of each article * Your opinion (100 words each. *10 advanced vocabulary and phrases based in each theme. Objective: Develop awareness & opinion writing. 3. Financial Literacy Task Ask your parents about: * Monthly budget * Savings methods * Investments (FD, SIP, insurance etc.) Prepare: * Sample monthly budget for a family * Reflection: “Why money management is important”. Write an article for about 200 words.

	4. Social Awareness Project Choose one issue: * Mental health * Social media addiction * Gender equality * Climate change Prepare: * 5-page report * Awareness poster *Article *10 advanced vocabulary &phrases on each theme.
IP	## Part A: Theory & Research • Write short notes on the following topics: 1. Components of a Computer System (Input, Output, Storage, Processing) 2. Difference between Hardware and Software 3. Types of Operating Systems (Batch, Time-sharing, Real-time, Distributed) 4. Role of Memory (RAM, ROM, Cache, Virtual Memory) • Prepare a **chart** showing the evolution of computer systems from **First Generation to Fifth Generation**. ## Part B: Practical Work • Create a **PowerPoint presentation** on "Functions of an Operating System." • Prepare a **flowchart** showing how data flows in a computer system (from input to output). • List 10 commonly used **keyboard shortcuts** and explain their utility. ## Part C: Application & Analysis • Compare **Windows OS vs Linux OS** in terms of usability, security, and applications. • Write a report (200 words) on "The importance of computer systems in modern education." • Identify 5 examples of **embedded systems** used in daily life (e.g., washing machine, ATM, smartphone) and explain their role. ## Part D: Creative Tasks • Design a **poster** on "Cyber Safety and Responsible Use of Computers." • Create a **mind map** showing different types of software (System Software, Application Software, Utility Software). • Write a slogan on "Computer Literacy for All."
CS	## Part A: Theory & Research • Write short notes on the following topics: 1. Components of a Computer System (Input, Output, Storage, Processing)

	2. Difference between Hardware and Software 3. Types of Operating Systems (Batch, Time-sharing, Real-time, Distributed) 4. Role of Memory (RAM, ROM, Cache, Virtual Memory) • Prepare a chart showing the evolution of computer systems from First Generation to Fifth Generation. **Part B: Practical Work** • Create a PowerPoint presentation on "Functions of an Operating System." • Prepare a flowchart showing how data flows in a computer system (from input to output). • List 10 commonly used keyboard shortcuts and explain their utility. **Part C: Application & Analysis** • Compare Windows OS vs Linux OS in terms of usability, security, and applications. • Write a report (200 words) on "The importance of computer systems in modern education." • Identify 5 examples of embedded systems used in daily life (e.g., washing machine, ATM, smartphone) and explain their role. **Part D: Creative Tasks** • Design a **poster** on "Cyber Safety and Responsible Use of Computers." • Create a **mind map** showing different types of software (System Software, Application Software, Utility Software). • Write a slogan on "Computer Literacy for All."
PHYSICS	1) Practice paves the way to success. Hence, utilize your vacations and practice the syllabus covered so far in Physics. Do all the ncert back exercise questions and intext questions of the chapter1 and chapter2 in your physics notebook. 2) Prepare a collage on a thick chart paper individually from the topics given as below depicting their applications and uses if possible. (i) Work, energy and power (ii) Bernoulli's principle (iii)Pascal's law (iv) Thermodynamics (v) Surface tension (vi)Moment of inertia of rigid bodies (vii)Mechanical properties of solids (viii) Planetary Motion (ix)Viscosity (x)Law of conservation of angular momentum (xi) Capillarity action (xii) Kinetic theory of gases
CHEMISTRY	1. Do all intext and back exercise questions of NCERT text book for the following Chapters (1) Some Basic concepts of chemistry (2) Structure of Atom 2.Prepare a research paper on any one of the following topics : (a) The role of chemistry to save and to improve environment

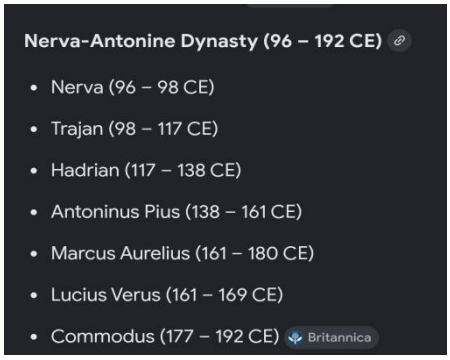
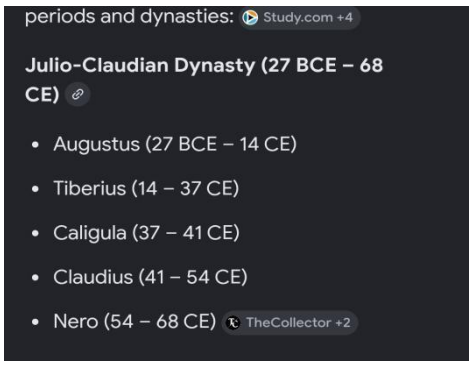
<table>
<tr><td></td><td>(b) Future of e-vehicles
(C) Chemistry of nano particle stained glass.

Format of Research paper
1.Title page
2.Abstract/Summary (Collage Work)
3.Introduction
4 Background/History
5.Method (Experiment/ Survey /Data)
6.Result/Conclusion</td></tr>
<tr><td>BIOLOGY</td><td>
<table>
<tr><th>S.NO.</th><th>TOPIC</th></tr>
<tr><td>1.</td><td>Circulatory system</td></tr>
<tr><td>2.</td><td>Respiratory system</td></tr>
<tr><td>3.</td><td>Excretory system</td></tr>
<tr><td>4.</td><td>Skeletal system</td></tr>
<tr><td>5.</td><td>locomotion</td></tr>
<tr><td>6.</td><td>Plant respiration- Glycolysis, kreb’s cycle</td></tr>
<tr><td>7.</td><td>muscles</td></tr>
<tr><td>8.</td><td>Cell division</td></tr>
<tr><td>9.</td><td>Morphology and anatomy of frog</td></tr>
<tr><td>10.</td><td>Endocrine system</td></tr>
</table>
Instructions:
● Your project should have cover page, certificate, acknowledgement, index, introduction/abstract, main content and references.Project should be handwritten. (minimum 15-20 pages)
● Draw/paste colored pictures/photographs.
<u>Complete your Biology registers till Plant kingdom chapter along with exercise questions..</u>
</td></tr>
<tr><td>POLITICAL SCIENCE</td><td>Prepare a hand written project on any topic from your NCERT text book

Detailed Project Guidelines:
1. Cover Page
Title of the Project
Student’s Name
Class and Section
Roll Number
Subject
School Name
Session 2026–27
2. Certificate
3. Acknowledgement
4. Index
5. Introduction
Brief background of the topic (1–2 pages).
6. Main Content
7. Maps.illustrations, Bibliography
8.Detailed explanation with headings and subheadings.
9.Please complete all the NCERT questions and exercises given in your text book
Also learn all the chapters.</td></tr>
<tr><td>PHYSICAL EDUCATION</td><td>Make a project on Any one game of your choice out of the list below. Labeled diagram of field & equipment (Rules, Terminologies & Skills)

Basketball, Football, Kabaddi, Kho-Kho, Volleyball, Handball, Hockey, Cricket, Boxing and Judo.</td></tr>
</table>

	Assignment 1 **Long Answers Questions 5 Markers** 1. Describe the meaning of Physical education. Also mention at least two definition of the same. 2. List the Importance of physical education in school. 3. What is the modern concept of physical education? 4. Describe the main objectives of physical education. 5. How does physical education contribute to an individual's development?
PAINTING	**Long answer type questions** **Q.1** What do you mean by Fundamentals of Art? **Q.2** Explain the meaning of form in art. **Q.3** Define texture with suitable examples. **Q.4** Name any two famous sites of pre-historic rock paintings in India. **Q.5** What are the main features of Prehistoric Rock Paintings found in Bhimbetka? Explain with examples and illustrations. **Q.6** What materials were used by early humans to make colours? **Q.7** Describe the materials, tools, and themes used by early humans in their cave paintings. How do these reflect their lifestyle? **Q.8** Write a short note on Bhimbetka Rock Shelters. **Q.9** How do rock paintings reflect the culture of early humans?. **Practical work** - Make any two folk art paintings on A2 size sheet. - Make a coloured still life & a colour wheel on A2 size sheet
PSYCHOLOGY	Part 1: Observation Task Write at least one page: observe any one person at home for 15–20 minutes. Write about: ● Their behaviour ● Facial expressions ● Body language ● Emotional reactions ● Possible thoughts or feelings behind the behaviour Part 2: Self Reflection Write a short reflection on: "How understanding psychology can improve my relationships and daily life." (200–250 words)
MUSIC	Prepare a project file on the following topics: 1) परिभाषाएँ: संगीत, ध्वनि, नाद, श्रुति, स्वर 2) तानसेन का जीवन परिचय 3) 5 तालबद्ध अलंकार

	4) स्वरों के पूरे नाम 5) राग भीमपलासी का परिचय
HINDI	1. निम्नलिखित विषय पर दिए गए कार्य बिंदु के आधार पर एक परियोजना कार्य तैयार कीजिए - i)संत साहित्य और समाज सुधार कार्य बिंदु :- • कबीर एवं मीरा के विचार • समाज सुधार में संतो की भूमिका • अंधविश्वास एवं भेद भाव पर प्रहार ii) भारतीय संस्कृति और नैतिक मूल्य (नमक का दारोगा पाठ के आधार पर) कार्य बिंदु :- • ईमानदारी का महत्त्व • भ्रष्टाचार की समस्या • वंशीधर के चरित्र से मिलने वाली शिक्षा • अपने जीवन में अपनाने योग्य मूल्य (चित्र एवं सजावट सहित सुव्यवस्थित ढंग से परियोजना कार्य की प्रस्तुति तैयार कीजिए) 2. निम्नलिखित विषय पर लगभग 200 शब्दों में रचनात्मक लेख लिखिए - i) पर्यावरण संरक्षण में युवाओं की भूमिका ii) कृत्रिम बुद्धिमत्ता (AI) और भविष्य
HISTORY	History Project Project Name: Roman Empire - Make a proper File with Picture of the Roman Emperor and their works, important point starting from Julius Caesar then Order of the following:  

Dominate & Later Empire (284 – 476 CE)

- Diocletian (284 – 305 CE)
- Constantine the Great (306 – 337 CE)
- Julian (361 – 363 CE)
- Theodosius I (379 – 395 CE)
- Romulus Augustulus (475 – 476 CE) – The last Western Roman Emperor.

D.A.V. CENTENARY PUBLIC SCHOOL, CHANDER NAGAR, GHAZIABAD

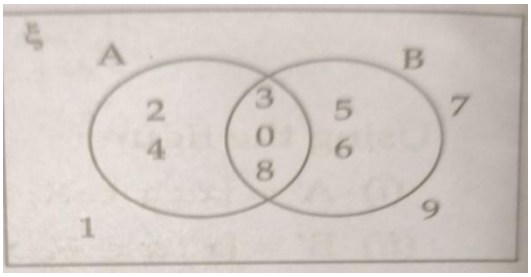
Holiday Homework, Class: XI – 2026-27 (Mathematics)

Chapter- 1 (Sets)

1. If all the elements of a set possess a single common property then it can be represented by (a) roaster form (b) set-builder form (c) both (a) and (b) (d) Venn diagram
2. The set {1 -, 1} in the set builder form can be written as (a) {- 1, 1} (b) $\{x \in W: x \leq 1\}$ (c) $\{x \in Z: x \leq 1\}$ (d) $\{x: x is\ a\ solution\ of\ x^2 = 1\}$
3. The set {2, 3, 5, 7, 11, 13} in set builder form can be written as (a) $\{x: x\ is\ a\ prime\ number\}$ (b) $\{x: x\ is\ odd\ prime\ number < 15\}$ (c) $\{x: x\ is\ a\ prime\ number \leq 13\}$ (d) $\{x: x\ is\ a\ number\ having\ exactly\ 2\ factors\}$
4. The element of set A, satisfy the property $\frac{n}{2n+1}, n \in N, n < 5$ for their elements. The element which does not belong to the set is (a) $\frac{3}{7}$ (b) $\frac{4}{9}$ (c) $\frac{1}{3}$ (d) $\frac{5}{11}$
5. Represent the set $\{x \in Z, x^2 \leq 25\}$ in roaster form (a){0, 1, 2, 3, 4, 5} (b) {1, 2, 3, 4, 5} (c){1, 2, 3,4} (d){-5, -4, -3, -2, -1, 0, 1, 2, 3, 4, 5}
6. If $A \subset B$, then (a) $a \in A \Rightarrow a \notin B$ (b) $a \in A \Rightarrow a \in B$ (c) $a \notin A \Rightarrow a \in B$ (d) $a \in B \Rightarrow a \in A$
7. The number of subset of a set containing n elements is (a)2^n (b) 2^{n-1} (c) $2^n - 1$ (d) n^n
8. The set $(A \cap B^{'})' \cup (B \cap C)$ is equal to (a) $A' \cup B \cup C$ (b) $A' \cup B$ (c)$A' \cup C'$ (d) $A' \cap B$
9. If set A: numbers multiple of 4. Set B: numbers multiple of 6, then set $A \cap B$ is (a) numbers multiple of 2 (b) numbers multiple of 4 (c) numbers multiple of 12 (d) numbers multiple of 24
10. For all sets A and B, $A - (A \cap B)$ is equal to (a) B - A (b) A - B (c) $A' \cap B'$ (d) $A' \cap B'$

Exercise: -

1. Write the following sets in set-builder form:
   (a) $A = \{\frac{1}{3}, \frac{2}{5}, \frac{3}{7}, \frac{4}{9}\}$ $(b)\ B = \{\frac{1}{2}, \frac{2}{3}, \frac{3}{4}, \frac{4}{5}, \frac{5}{6} ----\}$
   (b) $C = \{1, \frac{1}{4}, \frac{1}{9}, \frac{1}{16}, \frac{1}{25} -----\}$
2. Write the following in set roaster form: (a) $\{x: x \in Z, x^2 \leq 16\}$
   (b) $\{x: x \in N, x = n^3, n \leq 5\}$
3. Write the proper subsets of set $A = \{\emptyset, a\}$.
4. Write the number of proper subsets of the set {1, 2, 3}
5. Write the set builder of the following intervals:
   (a) $[-2, 2[$ (b) $[0, 5]$ (c) $]-\frac{1}{2}, \frac{5}{2}[$ (d)]2,6]
6. Let S= {x: x is a multiple of 3 and x < 100}, P = {x: x is a prime number <20}, then find n(S) + n(P).
7. From the adjoining Venn diagram, determine the following:



(i) A’ (ii) B’ (iii) (A∩ B)'

8. If W = {0, 1, 2, 3, 4, 5, 6, 7}, A = {2, 5, 7}, B = {0, 2, 3, 7} and C = {0, 3, 6}, from the following sets: (i) (A∪ B)' (ii) A – C (iii) A∩ $(B \cup C)$
9. Let W = {x: x∈ N and $x \leq 8\}$, $A = \{x: 5 < x^2 < 50\}$ and $B = \{x: x\ is\ prime\}$.
   Draw a Venn diagram to show the relationship between the given sets. Hence list the elements of the following sets: (i) A’ (ii) B’ (iii) A – B. Is A – B = A∩ B'?
10. If A and B are two sets and U is the universal set such that n(U) = 700, n(A) = 290, n(B) = 240 and n (A∩ B) = 110, then find n (A’∩ B').
11. A and B are two sets such that n(A – B) = 14 + x , n (B – A) = 3x and n(A ∩ $B) = x$, Draw a Venn diagram to illustrate this information. If n(A) = n(B), find (i) the value of x (ii) n(A∪ B).
12. In a class of 25 students, 12 have taken mathematics, 8 have taken mathematics but not biology. If each student has taken at least one subject, find the number of students who taken (i) Biology but not mathematics (ii) Both mathematics and biology.
13. If n(W) = 40, n(A) = 25 and n(B) = 20, then find: (i) the greatest value of n(A∪ B) (ii) the least value of n(A∩ B)
14. Out of 500 car owners investigated, 400 owned car A and 200 owned car B, 50 owned both A and B. Is this data correct?
15. If n(W) = 50, n(A) = 30 and n(B) = 28, find (i) the greatest value of n(A∪ B) (ii) the least value of n(A∩ B)
16. A and B are two sets such that n(A – B) = 14 + x , n (B – A) = 3x and n(A ∩ $B) = x$, Draw a Venn diagram to illustrate this information. If n(A) = n(B), find (i) the value of x (ii) n(A∪ B).

Case-study

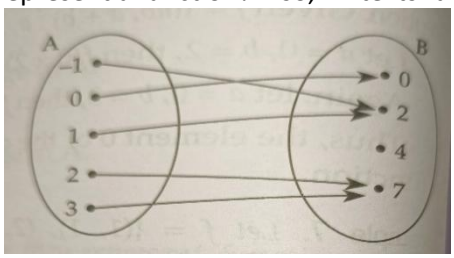
1. In a survey of 100 students, the number of students studying the various languages were found to be: English only 14, English but not Hindi 23, English and Sanskrit 8, English 26, Sanskrit48, Sanskrit and Hindi 8, no language 24,

Find (i) how many students were studying Hindi
(ii)) how many students were studying Hindi and English.

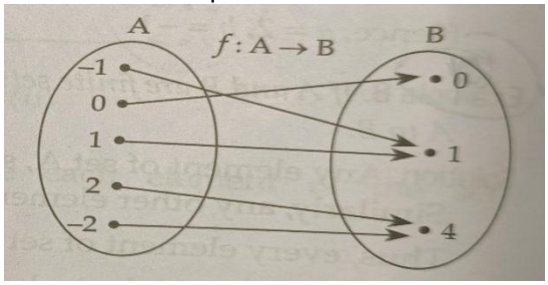
2. In a survey of a town, it was found that the number of people buying only Hindustan Times is 80%of number of people buying both the newspapers Hindustan Times and Times of India. The number of people buying only the times of India is 60% less than the number who buy both. The number of people buying neither of these two is 22,000 less than the number of people in the town.
   Based on the above information, answer the following questions:
   (i) The number of people buying Hindustan Times?
   (ii) The number of people buying Times of India?
   (iii) The number of people buying both the newspapers?
   (iv) The number of people buying exactly one of the two newspapers?
   (v) The number of people buying only Hindustan Times?

Chapter-2 (Relations and Functions)

1. If a relation R is defined on the set Z of integers by the rule $(a, b) \in R \Leftrightarrow a^2 + b^2 = 25$. Then Domain (R)=? (a) {3, 4,5} (b) {0, 3, 4, 5} (c) {0, ± 3, ± 4, ± 5} (d) none of these
2. The relation R defined on the set A = {1, 2, 3, 4, 5} by R = {(a, b): $|a^2 - b^2| < 16$} is given by: (a) {(1, 1).(2, 1), (3, 1), (4, 1), (2, 3)} (b) { (2, 3), (3, 2), (4, 2), (2, 4)} (c) {(3, 3), (4, 3), (5, 4), (3, 4)} (d) none of these
3. The relation on the set A = $\{x: |x| < 3, x \in Z\}$ is defined by $R = \{(x, y): y = |x|, x \neq -1\}$. Then the number of elements in the power set of R is: (a) 32 (b) 16 (c) 8 (d) 64
4. Let a and B be two sets containing 4 and 2 elements respectively. Then the number of subsets of the set $A \times B$, each having at least three elements is: (a) 275 (b) 510 (c) 219 (d) 256
5. If R is a relation on the set A = {1, 2, 3, 4, 5, 6, 7, 8, 9} given by $x\ R\ y \Leftrightarrow y = 3x$, then R is (a) {(3, 1), (6, 2), (8, 2) , (9, 3)} (b) {(3, 1), (6, 2), (9,3)} (c) {(3, 1), (2, 6), (3, 9)} (d) none of these
6. Let A = {1, 2, 3} and B = {1, 3, 5}. If relation R from A to B is given by R = {(1, 3), (2, 5), (3, 3)}, then R^{-1} is: (a) {(3, 3), (3, 1), (5, 2)} (b) {(1, 3), (2, 5), (3, 3)} (c) {(1, 3), (5, 2)} (d) none of these
7. If R = $\{(x, y): x, y \in Z, x^2 + y^2 \leq 4\}$ is a relation on Z, then domain of R is: (a) {0, 1, 2} (b) {0, -1, -2} (c) {-2, -1, 0, 1, 2} (d) none of these
8. Let R be a relation on N defined by $x + 2y = 8$. Then domain of R is: (a) {2, 4, 8} (b) {2, 4, 6, 8} (c) {2, 4, 6} (d) {1, 2, 3, 4}
9. If the set A has p elements, B has q elements, then the number of elements in $A \times B$ is: (a) p + q (b) p + q + 1 (c) p.q (d) p^2
10. If R is a relation from a finite set A having m elements to a finite set B having n elements, then the number of relations from A to B is: (a) 2^{mn} (b) $2^{mn} - 1$ (c) 2mn (d) m^n
11. Find x and y if (x – y, x + y) = (6, 10).
12. Which of the following relations are functions: (i) {(a, b), (b, c), (c, d), (d, e)} (ii) {(1, 2), (3, 1), (1, 3), (4, 1)}
13. If A = {- 3, - 1, 0, 4} and B = {-1, 0, 1, 2, 3}, then write the number of elements in A×B.
14. If A and B are finite sets such that n(A) = p and n(B) = q, then find the number of functions from A to B?
15. If $x \in [-1, 2, 3, 4, 5\} and\ y \in \{0, 3, 6\}$, form the set of all ordered pairs (x, y) such that x + y = 5.
16. Does the adjacent arrow diagram represent a function? If so, write its range.



17. If $A \times B = \{(-1,1), (-1, 2), (2, 1), (2, 2), (3, 1), (3,2)\}$, find A and B.
18. The adjacent arrow diagram represents a relation. List the pairs that satisfy the relation. Is this relation a function? Also find the rule for the above correspondence.

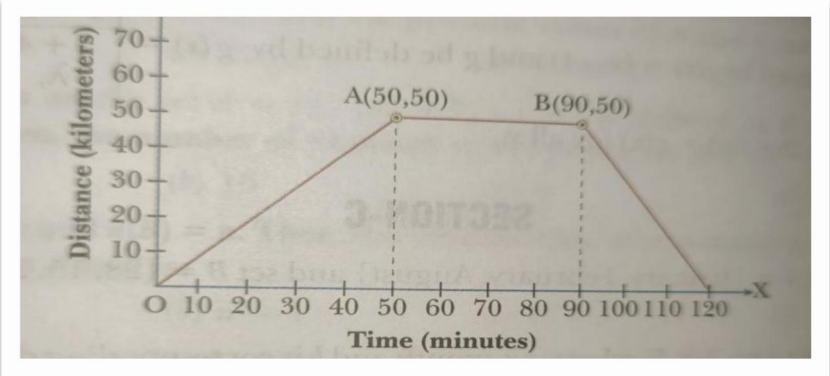


19. If $A \times B = \{(x, 1), (y, 2), (x, 3), (y, 3), (y, 1), (x, 2)\}$, find B× A.

20. Express the following function as a set of ordered pairs and find its range. $f: X \to R\ defined\ by\ f(x) = x^3 + 1$, where X = {-1, 0, 3, 7, 9}.
21. Let R be the relation on Z defined by $R = \{(x, y): x, y\ \in Z, x - y\ is\ an\ odd\ integer\}$. Find the domain and range of R.
22. Let R be the relation on N defined by R = {(x, y):$x, y \in N, and\ a + 3b = 12\}$. Then (i) list the element of R (ii) Find the domain of R (iii) Find the range of R
23. If R is the relation on N defined by $R = \left\{(a, b): a, b \in N\ and\ y = x + \frac{12}{x}\right\}, then\ find$ (i) R in roaster form (ii) domain of R (iii) range of R.
24. Let $\{(a, b): a, b \in Z\ and\ y = 2x - 4\}$. If (a, - 2) and (4, b^2) belong to R, find the value of a and b?
25. Let R be the relation on N to N defined by R = {(x, y):$x, y \in N, and\ a = b^2\}$. Are the following true?
(i) (a, a)$\in R \forall a \in N$. (ii) (a, a)$\in R \Rightarrow (b, a) \in R$ (iii) $(a, b) \in R\ and\ (b, c) \in R \Rightarrow (a, c) \in R$.
26. Find the domain and the range of the following functions: (i) $f(x) = \frac{x^2}{1+x^2}$
(ii) $f(x) = \frac{3}{2-x^2}$
27. Find the domain and the range of the following functions: (i) $f(x) = \sqrt{9 - x^2}$
(ii) $f(x) = \frac{1}{\sqrt{9-x^2}}$

Case-Study: -

1. Let A and B be any two non-empty sets and R be a relation from A to B, then inverse of relation R denoted by R^{-1} is a relation from B to a i.e. $R^{-1} \subset B \times A$. Also, $R^{-1} = \{(b, a): a, b\ \in R\}$. Clearly, (a, b) $\in R \Leftrightarrow (b, a) \in R^{-1}$.
If A = {2, 3, 4, 5}, B = {3, 6, 7, 10} and a relation from A to B is defined as R = {(x, y):x divides y, x$\in A, y \in B\}$
Based on above information, answer the following questions:
(i) Write R in roaster form.
(ii) Write R^{-1} in roaster form.
(iii) Find domain of R^{-1}.
(iv) Find range of R^{-1}.
2. This is the graph showing how far the distance have been travelled by Joseph (in his car) in a given time. He drove, stopped, completed his work and return back



Based on above information, answer the following questions:
(i) Find domain of the function, represented by the graph.
(ii) Find range of the function, represented by the graph.
(iii) Find the function, represented by the line AB.

Or

How much time did Joseph take to complete his work?