TRINITY GLOBAL SCHOOL

DAY CUM-RESIDENTIAL SCHOOL, PATNA

GRADE-VIII (A)

2026-27

SUMMER HOLIDAY HOMEWORK

Name:_____

Grade:_____

Section:_____

MATHS

DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE		DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE
DAY-01				DAY-11		
DAY-02				DAY-12		
DAY-03				DAY-13		
DAY-04				DAY-14		
DAY-05				DAY-15		
DAY-06				DAY-16		
DAY-07				DAY-17		
DAY-08				DAY-18		
DAY-09				DAY-19		
DAY-10				DAY-20		

ENGLISH

DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE		DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE
DAY-01				DAY-11		
DAY-02				DAY-12		
DAY-03				DAY-13		
DAY-04				DAY-14		
DAY-05				DAY-15		
DAY-06				DAY-16		
DAY-07				DAY-17		
DAY-08				DAY-18		
DAY-09				DAY-19		
DAY-10				DAY-20		

HINDI

DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE		DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE
DAY-01				DAY-11		
DAY-02				DAY-12		
DAY-03				DAY-13		
DAY-04				DAY-14		
DAY-05				DAY-15		
DAY-06				DAY-16		
DAY-07				DAY-17		
DAY-08				DAY-18		
DAY-09				DAY-19		
DAY-10				DAY-20		

SCIENCE

DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE		DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE
DAY-01				DAY-11		
DAY-02				DAY-12		
DAY-03				DAY-13		
DAY-04				DAY-14		
DAY-05				DAY-15		
DAY-06				DAY-16		
DAY-07				DAY-17		
DAY-08				DAY-18		
DAY-09				DAY-19		
DAY-10				DAY-20		

SOCIAL SCIENCE

DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE		DAYS	DATE OF COMPLETION	PARENT'S SIGNATURE
DAY-01				DAY-11		
DAY-02				DAY-12		
DAY-03				DAY-13		
DAY-04				DAY-14		
DAY-05				DAY-15		
DAY-06				DAY-16		
DAY-07				DAY-17		
DAY-08				DAY-18		
DAY-09				DAY-19		
DAY-10				DAY-20		

ENGLISH

Note : All Questions to be done in the Holiday Homework Notebook.

Day – 1 : Ex-01 of Sentences

Day – 2 : Ex-02 of Sentences

Day – 3 : Ex-03 of Sentences

Day – 4 : Ex-04 of Sentences

Day – 5 : Ex-05 of Sentences

Day – 6 : Ex-06 of Sentences

Day – 7 : Ex-07 of Sentences

Day – 8 : Ex-01 of Present Tense

Day – 9 : Ex-02 of Present Tense

Day – 10 : Ex-03 of Present Tense

Day – 11 : Comprehension passage – 1 of page 345

Day – 12 : Comprehension passage of page 346

Day – 13 : Comprehension passage of page 347

Day – 14 : Read any novel of your liking and write as review.

Day – 15 : Read any novel of your liking and write as review.

Day – 16 : Read any novel of your liking and write as review.

Day – 17 : Read any novel of your liking and write as review.

Day – 18 : Read any novel of your liking and write as review.

Day – 19 : Write a diary on the summer holidays you spent with your family.

Day – 20 : Write twenty new words and their meanings from the novels you read.

MATHEMATICS

Instructions:

(i) Holiday H.W. will be done in a separate note book day wise.

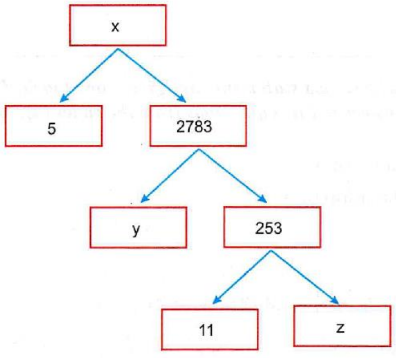
(ii) Draw left and top margin and write question number in the left margin & date in top margin.

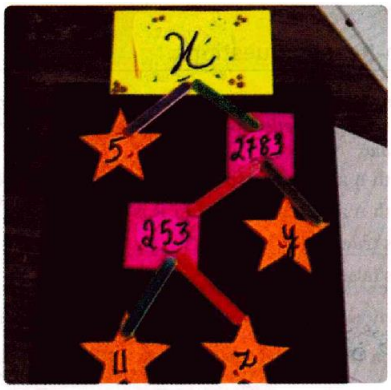
Day – 1

1. Find the HCF and LCM of 72 and 120.
2. Find the greatest number which divides 85 and 72 leaving remainders 1 and 2 respectively.
3. Find by prime factorisation the LCM of the numbers 18180 and 7575. Also, Find the HCF of the two numbers.
4. Three bells ring at intervals of 6, 12 and 18 minutes. If all the three bells rang at 6 am., when will they ring together again?
5. Find the HCF and LCM of 26, 65 and 117, using prime factorisation.
6. Prove that $\sqrt{2}$ is an irrational number.
7. Prove that $5-2\sqrt{3}$ is an irrational number. It is a given that $\sqrt{3}$ is an irrational number.
8. State true or false for each of the following statements and justify in each case:
   (i) $2\times3\times5\times7+7$ is a composite number. (ii) $2\times3\times5\times7+1$ is a composite number.
9. In a teachers' workshop, the number of teachers teaching French, Hindi and English are 48, 80 and 144 respectively. Find the minimum number of rooms required if the same number of teachers are seated in each room and all of them are of the same subject.

Day – 2

1. Can the number 4^n, n being a natural number end with the digit 0? Give reasons.
2. Prove that $\frac{2-\sqrt{3}}{5}$ is an irrational number, given that $\sqrt{3}$ is an irrational number.
3. If the HCF (210, 55) is expressible in the form $210\times5-55y$, find y.
4. Find the greatest number that will divide 445, 572 and 699 leaving remainders 4, 5 and 6 respectively.
5. Find the pairs of the natural numbers whose least common multiple is 78 and the greatest divisor is 13.
6. Prove that $\left(4\sqrt{2}+\frac{5}{3}\right)$ is an irrational number given that $\sqrt{2}$ is an irrational number.
7. 144 cartons of coke cans and 90 cartons of pepsi cans are to be stacked in a canteen. If each stack is of the same height and is to contain carton of same drink. What would be the greatest number of cartons in each stack?
8. 105 donkeys, 140 cows and 175 goats have to be taken across a river. There is only one boat which will have to make many trips in order to do so. The lazy boatman has his own conditions for transporting them. He insists that he will take the same number of animals in every trip and they have to be of the same kind. He will naturally like to take the largest possible number each times. Find how many animals went in each trip?
9. Prove that $\sqrt{7}$ is an irrational number.
10. **(Case Study Based Question)** A Mathematics Exhibition is being conducted in you School and one of your friends is creating a model of a factor tree. He's having some difficulty and asks for your help in completing a quiz for the audience.





Observe the given factor tree and answer the following:

(i) What will be the value of x?

(ii) What will be the value of y?

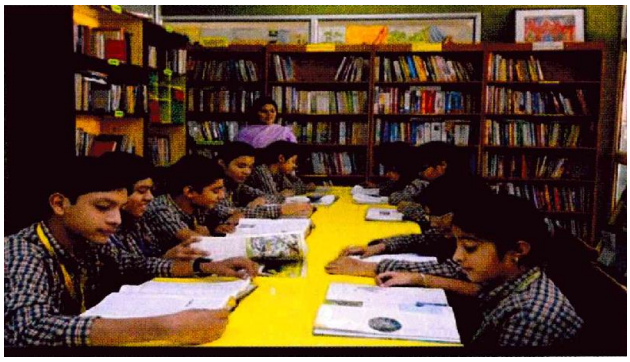
(iii) (a) According to Fundamental Theorem of Arithmetic 13915 is a composite number. Explain.

OR

(b) Express 13915 as its prime factors. Explain why this prime factorisation is unique?

Day – 3

1. On a morning walk, three persons step out together and their steps measure 30 cm, 36 cm and 40 cm respectively. What is the minimum distance each should walk so that each can cover the same distance in complete steps?
2. The LCM of two numbers is 9 times their HCF. The sum of LCM and HCF is 500. Find the HCF of two numbers.
3. Find the smallest number which is divisible by both 644 and 462.
4. An army contingent of 616 members is to march behind an army band of 32 members in a parade. The two groups are to march in the same number of columns. What is the maximum number of columns in which they can march?
5. Find the LCM of x^2-4 and x^4-16.
6. Prove that $\left(5\sqrt{3}+\frac{2}{3}\right)$ is an irrational number given that $\sqrt{3}$ is an irrational number.
7. There are 156, 208 and 260 students in groups A, B and C respectively. Buses are to be hired for a field trip. Find the minimum number of buses to be hired, if the same number of students of the same group should be accommodated in each bus.
8. What will be the least possible number of the planks, if three pieces of timber 42 m, 49 m, and 63 m long have to be divided into planks of the same length?
9. Prove that $(\sqrt{2}+\sqrt{5})$ is irrational.
10. **(Case Study Based Question)** To enhance the reading skills of grade X students, the school nominates you and two of your friends to set up a class library. There are 32 students in section A and 36 students in section B.



Based on the given information, answer the following questions:

(i) Express 36 as product of its primes.

(ii) If p and q are positive integers such that $p=ab^2$ and $q=a^2b$, where a, b are prime numbers, then find LCM (p, q).

(iii) (a) What is the minimum number of books you will acquire for the class library, so that they can be distributed equally among students of Section A or Section B?

OR

(b) If the product of two positive integers is equal to the product of their HCF and LCM is true then, find HCF (32, 36).

Day – 4

1. If p and q are the zeros of the polynomial $f(x) = 2x^2 - 7x + 3$, find the value of $p^2 + q^2$.
2. If α and β are the zeros of the quadratic polynomial $f(x) = 3x^2 - 5x - 2$, then evaluate $\frac{\alpha^2}{\beta} + \frac{\beta^2}{\alpha}$.
3. Find the zeros of the polynomial $q(x) = 8x^2 - 2x - 3$. Hence, find a polynomial whose zeros are 2 less than the zeros of $q(x)$.
4. If α and β are the zeros of $f(x) = 2x^2 + 5x + k$ such that $a^2 + \beta^2 + \alpha\beta = \frac{21}{4}$, find the value of k.
5. If α and β are the zeros of the polynomial $2x^2 - 3x + 1$, then find the value of (i) $\alpha^2\beta + \alpha\beta^2$ (ii) $\alpha^2 + \beta^2$.
6. Find a quadratic polynomial whose zeros are $\frac{5+\sqrt{2}}{5-\sqrt{2}}, \frac{5-\sqrt{2}}{5+\sqrt{2}}$.
7. Find the zeros of the following quadratic polynomials and verify the relationship between the zeros and the coefficients: $x^2 - (2a + b)x + 2ab$
8. If the sum of squares of the zeros of the quadratic polynomial $x^2 - 8x + k$ be 40, find k.
9. If α and β are zeros of polynomial $f(x) = 2x^2 + 11x + 5$, then find

   (i) $\alpha^4 + \beta^4$ (ii) $\frac{1}{\alpha} + \frac{1}{\beta} - 2\alpha\beta$
10. The figure given alongside shows the path of a diver, when she takes a jump from the diving board. Clearly it is a parabola.

    Annie was standing on a diving board, 48 feet above the water level. She took a dive into the pool. Her height (in feet) above the water level at any time 't' in seconds is given by the polynomial $h(t)$ such that $h(t) = -16t^2 + 8t + k$

    Based on the given information, answer the following questions:

    (i) What is the value of k?

    (ii) At what time will she touch the water in the pool?

    (iii) (a) Rita's height (in feet) above the water level is given by another polynomial $p(t)$ with zeros – 1 and 2. Then find the $p(t)$.

    OR

    (b) A polynomial $q(t)$ with sum of zeros as 1 and the product as – 6 is modelling Anu's height in feet above the water at any time t(in seconds). Then find the $q(t)$.

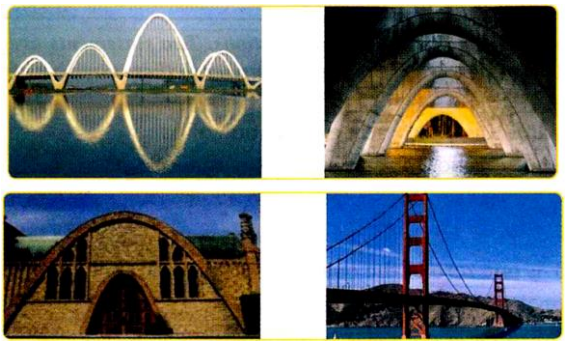
Day – 5

1. If m and n are the zeros of the polynomial $3x^2 + 11x - 4$, find the value of $\frac{m}{n} + \frac{n}{m}$.
2. If α, β are the two zeros of the polynomial $f(y) = y^2 - 8y + a$ and $\alpha^2 + \beta^2 = 40$, find the value of a.
3. If α and β are the zeros of the quadratic polynomial $f(t) = t^2 - p(t + 1) - c$, show that $(\alpha + 1)(\beta + 1) = 1 - c$.
4. If α and β are the zeros of the quadratic polynomial $f(x) = x^2 - px + q$.

   Prove that $\frac{\alpha^2}{\beta^2} + \frac{\beta^2}{\alpha^2} = \frac{p^4}{q^2} - \frac{4p^2}{q} + 2$
5. Obtain the zeros of the polynomial $p(x) = 2x^2 - 5x - 3$. Hence, obtain a polynomial each of whose zeros is one less than each of the zero of $p(x)$.
6. If α, β are the zeros of the quadratic polynomial $p(y) = y^2 - 4y + 3$, find the value of $\alpha^4\beta^3 + \alpha^3\beta^4$.
7. If α, β are the zeros of the polynomial $x^2 + x - 6$, find the value of $\frac{1}{\alpha^2} + \frac{1}{\beta^2}$.
8. Find the zeros of the quadratic polynomial $f(x) = p(x^2 + 1) - x(p^2 + 1)$ and verify the relationship between the zeros and the coefficients.
9. If α and β are the zeros of the quadratic polynomial $p(s) = 3s^2 - 6s + 4$. Find the value of $\frac{\alpha}{\beta} + \frac{\beta}{\alpha} + 2\left(\frac{1}{\alpha} + \frac{1}{\beta}\right) + 3\alpha\beta$

Case Study Based Question

10. The below pictures are few natural examples of parabolic shape which is represented by a quadratic polynomial. A parabolic arch is a curve in the shape of a parabola. This shape distributes load evenly across the arch, making it ideal for use in bridges and a variety of other architectural structures.



Based on the above information, answer the following questions.

(*i*) If α and $\frac{1}{\alpha}$ are the zeros of the quadratic polynomial $2x^2 - x + 8k$, then write the value of k.

(*ii*) Find the sum of zeros of the polynomial $p(x) = 2x^2 - x + 2$.

(*iii*) (*a*) If the sum of the zeros is $-p$ and product of the roots is $-\frac{1}{p}$, then find the quadratic polynomial.

OR

(*b*) Write the zeros of the polynomial $p(x) = 4x^2 - 4x + 1$.

Day – 6

Case Study based Question

1. A school is organizing a grand cultural event to show the talent of its students. To accommodate the guests, the school plans to rent chairs and tables from a local supplier. It finds that rent for each chair is ₹50 and for each table is ₹200 . The school spends ₹30,000 for renting the chairs and tables. Also, the total number of items (chairs and tables) rented are 300.

If the school rents 'x' chairs and 'y' tables, answer the following questions:

(*i*) Write down the pair of linear equations representing the given information.

(*ii*) (*a*) Find the number of chairs and number of tables rented by the school.

OR

(*b*) If the school wants to spend a maximum of ₹27,000 on 300 items (tables and chairs), then find the number of chairs and tables it can rent.

(*iii*) What is maximum number of tables that can be rented in ₹30,000 if no chairs are rented?

2. Essel World is one of India's largest amusement parks that offers a diverse range of thrilling rides, water attractions and entertainment options for visitors of all ages. The park is known for its iconic "Water Kingdom" section, making it a popular destination for family outings and fun-filled adventure. The ticket charges for the park are ₹150 per child and ₹ 250 per adult.

On a day, the cashier of the park found that 300 tickets were sold and an amount of ₹55,000 was collected.

Based on the above information, answer the following questions:

(*i*) If the number of children visited is x and the number of adults visited is y, then write the given situation algebraically.

(*ii*) (*a*) How many children visited the amusement park that day?

OR

(*b*) How many adults visited the amusement park that day?

(*iii*) How much amount will be collected if 250 children and 100 adults visit the amusement park?

3. Solve the pair of equations $x = 3$ and $y = -4$ graphically.

4. Find the value(s) of k for which the pair of equations

$$\begin{cases} kx + 2y = 3 \\ 3x + 6y = 10 \end{cases}$$

has unique solution.

5. Solve the following system of equations graphically :

$2x - y - 2 = 0$ and $-4x + y + 4 = 0$

Also, find the absolute difference between the ordinates of the points where given lines cut y-axis.

6. (*a*) The cost of 2 kg apples and 1 kg of grapes on a day was found to be ₹320 . The cost of 4 kg apples and 2 kg grapes was found to be ₹600.

If cost of 1 kg of apples and 1 kg of grapes is ₹x and ₹y respectively, represent the given situation algebraically as a system of equations and check whether the system so obtained is consistent or not.

OR

(*b*) Solve for x and y:

$\sqrt{2}x + \sqrt{3}y = 5$ and $\sqrt{3}x - \sqrt{8}y = -\sqrt{6}$

7. Rehana went to a bank to withdraw ₹2,000. She asked the cashier to give her ₹50 and ₹100 notes only. Rehana got 25 notes in all. Find how many notes of ₹50 and ₹100 did she receive.

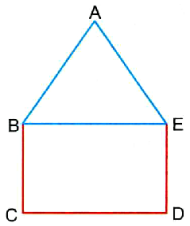
8. Three years ago, Rashmi was thrice as old as Nazma. Ten years later, Rashmi will be twice as old as Nazma. How old are Rashmi and Nazma now?

Day – 7

1. On comparing the ratios $\frac{a_1}{a_2}$, $\frac{b_1}{b_2}$ and $\frac{c_1}{c_2}$, find out whether the linear equations $4x - 5y = 8$ and $3x - \frac{15}{4}y = 6$ are consistent or inconsistent.

2. Solve the following system of linear equations $7x - 2y = 5$ and $8x + 7y = 15$ and verify your answer.

3. In figure, $ABCDE$ is a pentagon with $BE \parallel CD$ and $BC \parallel DE$. BC is perpendicular to CD. $AB = 5$ cm, $AE = 5$ cm, $BE = 7$ cm, $BC = x - y$ and $CD = x + y$. If the perimeter of $ABCDE$ is 27 cm. Find the value of x and y, given $x, y \neq 0$.



4. If we add 1 to the numerator and subtract 1 from the denominator, a fraction reduces to 1. It becomes $\frac{1}{2}$ if we only add 1 to the denominator. What is the fraction?.

5. Vijay invested certain amounts of money in two schemes A and B, which offer interest at the rate of 8% per annum and 9% per annum, respectively. He received ₹ 1,860 as the total annual interest. However, had he interchanged the amounts of investments in the two schemes, he would have received ₹20 more as annual interest. How much money did he invest in each scheme?

6. A part of monthly hostel charges in a college hostel are fixed and the remaining depends on the number of days one has taken food in the mess. When a student A takes food for 25 days, he has to pay ₹ 4,500, whereas a student B who takes food for 30 days, has to pay ₹ 5,200. Find the fixed charges per month and the cost of food per day.

7. Solve the following system of linear equations graphically and shade the region between the two lines and x-axis.

$3x + 2y - 4 = 0$ and $2x - 3y - 7 = 0$

8. The sum of the numerator and denominator of a fraction is 3 less than twice the denominator. If the numerator and denominator are decreased by 1, the fraction becomes half. Determine the fraction.

9. The sum of a two digit number and the number formed by interchanging its digits is 110. If 10 is subtracted from the original number, the new number is 4 more than 5 times the sum of the digits in the first number. Find the original number.

Case Study based Question

10. A test consists of 'True' or 'False' questions. One mark is awarded for every correct answer while $\frac{1}{4}$ mark is deducted for every wrong answer. A student knew correct answers of some of the questions. Rest of the questions he attempted by guessing. He answered 120 questions and got 90 marks.

Type of Question	Marks given for correct answer	Marks deducted for wrong answer
True/False	1	0.25

Based on the above information answer the following questions:

(*i*) How many number of questions did he guess, considering all the guessing are wrong.

(*ii*) How many maximum marks can a student score?

(*iii*) (*a*) If answer to all questions he attempted by guessing were wrong, then how many question were answered correctly to score 95 marks?

OR

(*b*) If the answer to all the questions he attempted by guessing were wrong and answered 80 correctly, then how many marks will he get?

Day – 8

1. Find c if the system of equations

$cx+3y+(3-c)=0$; $12x+cy-c=0$ has infinitely many solutions.

2. Sumit is 3 times as old as his son. Five years later, he shall be two and a half time as old as his son. How old is Sumit at present?

3. The monthly incomes of two persons are in the ratio 9 : 7 and their monthly expenditures are in the ratio 4 : 3. If each saved ₹5,000, express the given situation algebraically as a system of linear equations in two variables. Hence, find their respective monthly incomes.

4. Solve graphically the system of linear equations:

$4x - 3y + 4 = 0$ and $4x + 3y - 20 = 0$

Find the area bounded by these lines and x-axis.

5. Solve the following linear equations:

$152x - 378y = -74$ and $-378x + 152y = -604$

6. Taxi charges in a city consist of fixed charges and the remainings charges depend upon the distance travelled. For a journey of 10 km, the charge paid is ₹ 75 and for a journey of 15 km, the charge paid is ₹ 110. Find the fixed charge and charges per km. Hence, find the charge of covering a distance of 35 km.

7. Draw the graphs of $2x + y = 6$ and $2x - y + 2 = 0$. Shade the region bounded by these lines and x-axis. Find the area of the shaded region.

8. (*a*) A two-digit number is such that the product of its digits is 12. When 36 is added to this number, the digits interchange their places. Find the number.

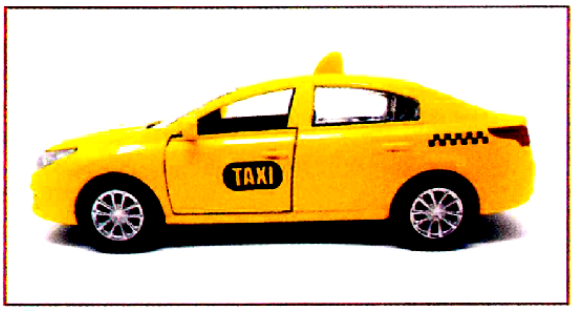
OR

(*b*) A student scored a total of 32 marks in class tests in Mathematics and Science. Had he scored 2 marks less in Science and 4 marks more in Mathematics, the product of his marks would have been 253. Find his marks in the two subjects.

9. A train covered a certain distance at a uniform speed. If the train would have been 10 km/h faster, it would have taken 2 hours less than the scheduled time and if the train were slower by 10 km/h it would have taken 3 hours more than the scheduled time. Find distance covered by the train.

Case Study based Question

10. It is common for the government to revise travel fares from time to time based on various factors, such as inflation (a general increase in prices and a decrease in the purchasing value of money), for different types of vehicles like autorickshaws, taxis, radio cabs, etc. The charges for autorickshaws in a city typically consist of a fixed charge along with a charge based on the distance covered. Study the following situations:



Name of the City	Distance travelled (km)	Amount paid (₹)
City *A*	10	75
	15	110
City *B*	8	91
	14	145

(*i*) If the fixed charges of auto rickshaw be ₹ x and the running charges be ₹ y km/h, write the pair of linear equations representing the travel in city A.

(*ii*) If the fixed charges of auto rickshaw be ₹ x the running charges by ₹ y km/h, write the pair of linear equations representing the travel in city B.

(*iii*) (*a*) Write the amount paid by a person travelling 100 km in city A.

OR

(*b*) Write the amount paid by a person travelling 60 km in city B.

Day – 9

1. If the discriminant of the quadratic equation $3x^2-2x+c=0$ is 16, then the value of c is:

(a) 1 (b) 0 (c) -1 (d) $\sqrt{2}$

2. The ratio of the sum and product of the roots of the quadratic equation $5x^2-6x+21=0$ is:

(a) 5 : 21 (b) 2 : 7 (c) 21 : 5 (d) 7 : 2

3. The quadratic equation whose roots are 7 and $\frac{1}{7}$ is:

(a) $7x^2-50x+7=0$ (b) $7x^2-50x+1=0$ (c) $7x^2+50x-1=0$ (d) $7x^2+50x-1=0$

4. The quadratic equation $x^2-4x+k=0$ has distinct real roots if:

(a) $k=4$ (b) $k>4$ (c) $k=16$ (d) $k<16$

5. Find the sum and product of the roots of the quadratic equation $2x^2-9x+4=0$.

6. Find the value of k for which $x=2$ is a solution of the equation $kx^2+2x-3=0$.

7. Find the value of 'p' for which the quadratic equation $p(x-4)(x-2)+(x-1)^2=0$ has real and equal roots.

8. Sum of the areas of two squares is 157 m^2. If the sum of their perimeters is 68 m, find the sides of the two squares.

9. Find that value of p for which the quadratic equation $(p+1)x^2-6(p+1)x+3(p+9)=0, p\neq -1$ has equal roots. Hence find the roots of the equation.

10. A plane left 30 minutes late than its scheduled time and in order to reach the destination 1500 km away in time, it had to increase its speed by 100 km/h from the usual speed. Find its usual speed.

Day – 10

1. Find the roots of the quadratic equation $100x^2 - 20x + 1 = 0$ by factorisation method.
2. Find the value of k for which the roots of the equation $3x^2 - 10x + k = 0$ are reciprocal of each other.
3. The altitude of a right triangle is 7 cm less than its base. If the hypotenuse is 13 cm, find the other two sides
4. The sum of two numbers is 15. If the sum of their reciprocals is $\frac{3}{10}$, find the two numbers.
5. Solve for x : $4x^2 - 4a^2x + (a^4 - b^4) = 0$
6. Find the values of k, for which the quadratic equation $(k + 4)x^2 + (k + 1)x + 1 = 0$ has equal roots.
7. Express the equation $\frac{x-2}{x-3} + \frac{x-4}{x-5} = \frac{10}{3}; (x \neq 3, 5)$ as a quadratic equation in standard form. Hence, find the roots of the equation so formed.
8. A motorboat whose speed is 24 km/h in still water takes 1 hour more to go 32 km upstream than to return downstream to the same spot. Find the speed of the stream.
9. At present Asha's age (in years) is 2 more than the square of her daughter Nisha's age. When Nisha grows to her mother's present age, Asha's age would be one year less than 10 times the present age of Nisha. Find the present ages of both Asha and Nisha.

Case Study based Question

10. A garden designer is planning a rectangular lawn that is to be surrounded by a uniform walkway.

The total area of the lawn and the walkway is 360 square metres. The width of the walkway is same on all sides. The dimensions of the lawn itself are 12 metres by 10 metres.

Based on the information given above, answer the following questions:

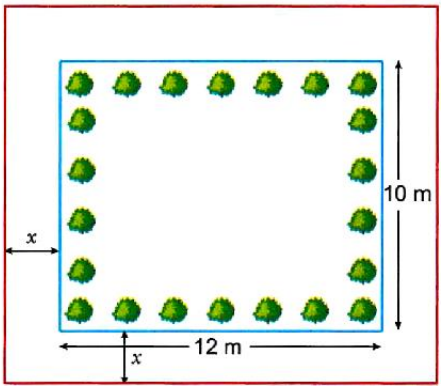
(*i*) Formulate the quadratic equation representing the total area of the lawn and the walkway, taking width of walkway = x m.

(*ii*) (*a*) Solve the quadratic equation to find the width of the walkway 'x'.

OR

(*b*) If the cost of paving the walkway at the rate of ₹ 50 per square metre is ₹12,000 , calculate the area of the walkway.

(*iii*) Find the perimeter of the lawn.



Day – 11

1. Find the roots of the quadratic equation:

$$2x^2 + \frac{5}{3}x - 2 = 0$$ using quadratic formula.

2. If -5 is a root of the quadratic equation $2x^2 + px - 15 = 0$ and the quadratic equation $p(x^2 + x) + k = 0$ has equal roots, then find the value of k.
3. Solve for x : $x^2 + 5x - (a^2 + a - 6) = 0$
4. Solve for x : $\frac{1}{x+1} + \frac{2}{x+2} = \frac{4}{x+4}; x \neq -1, -2, -4$
5. If the roots of the quadratic equation $(a - b)x^2 + (b - c)x + (c - a) = 0$ are equal, prove that $2a = b + c$.
6. If the roots of the equation $(c^2 - ab)x^2 - 2(a^2 - bc)x + b^2 - ac = 0$ in x are equal, then show that either $a = 0$ or $a^3 + b^3 + c^3 = 3abc$.

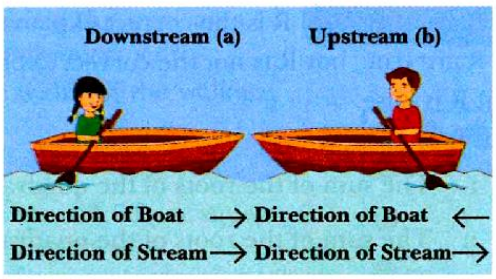
7. The sides of a right triangle are such that the longest side is 4 m more than the shortest side and the third side is 2 m less than the longest side. Find the length of each side of the triangle. Also, find the difference between the numerical values of the area and the perimeter of the given triangle.

8. A 2-digit number is such that the product of the digits is 14. When 45 is added to the number, the digits are reversed. Find the number.

9. Two water taps together can fill a tank in $9\frac{3}{8}$ hours. The tap of larger diameter takes 10 hours less than the smaller one to fill the tank separately. Find the time in which each tap can separately fill the tank.

Case Study Based Question

10. The speed of a motor boat is 20 km/h. For covering the distance of 15 km the boat took 1 hour more for upstream than downstream.



Based on the above information answer the following questions.

(*i*) What is the speed of current?

(*ii*) What is the speed of the motor boat in upstream direction?

(*iii*) (*a*) Which is the correct quadratic equation for the speed of the current?

OR

(*b*) How much time boat took in downstream?

Day – 12 (open door)

Page No. 17 — Q. No. 1 to 6

Day – 13 (open door)

Page No. 20, 21, 22 — Q. No. 11 to 17

Day – 14 (open door)

Page No. 34, 35 — Q. No. 1 to 7

Day – 15 (open door)

Page No. 38, 39, 40 — Q. No. 11 to 17

Day – 16 (open door)

Page No. 52, 53 — Q. No. 1 to 4

Day – 17 (open door)

Page No. 56, 57, 58 — Q. No. 11 to 17

Day – 18 (open door)

Page No. 69, 70 — Q. No. 1 to 5

Day – 19 (open door)

Page No. 72, 73, 74 — Q. No. 11 to 17

●●●

SCIENCE

Instructions:

Use your Science holiday homework notebook for all tasks.

Focus on neatness, accurate diagrams, and vibrant colours.

Day 1, 2: The Spoon Challenge

Activity: Take a large, shining stainless steel spoon. Look at your face in the inner curved side and the outer bulging side.

Draw two large diagrams of the spoon faces in your notebook. Label them as Concave Mirror and Convex Mirror.

Day 3, 4: Ray Diagram Masterpiece

Draw a full-page, neat ray diagram showing concave and convex mirror. Show the Pole (P), Centre of curvature (C) and Focus (F) on the mirrors.

Day 5, 6: The Lens Investigator

Draw a large, colourful diagram of a Convex Lens and a Concave Lens. Show how light rays "converge" (meet) after passing through a Convex lens and "diverge" (spread) after a Concave lens.

Day 7, 8: Real-World Mirror Spotting

Step outside (or look at a vehicle), find three different types of mirrors in your surroundings. Name them and mention their use.

Day 9, 10: The Newspaper Magic

1. Take a magnifying glass and hold it over a newspaper article. Slowly move the lens closer and then further away from the paper.

2. Draw two circles in your notebook. In the first, draw the text as it looks normally. In the second, draw the text as seen through the lens. Briefly mention the reason.

Day 11, 12: The "Near/ Far-Sighted" Mystery

1. Draw a "Myopic Eye" where the light rays meet in front of the retina instead of on it.

2. Draw a "Hypermetropic Eye" where the light rays meet behind the retina.

(Take the help of higher class books)

Day 13, 14: The Heat Search

Find at least three appliances in your home that use the "Heating Effect" of current. Draw neat sketch of them. Label the Heating Element.

Day 15, 16: Safety First

Draw colourful pictures of Electric Fuse and an MCB. Briefly Mention their use.

Day 17, 18: Magnetic Mystery Around You

Find a device that uses a "Magnetic Effect" (e.g., an electric bell or a small toy motor). Draw a labelled diagram of it.

Day 19, 20: The "Pocket Magnet" Project

Build a Portable Electromagnet and bring it to the school after your summer holidays. [Hints: Wrap thin insulated copper wire tightly around a large iron nail (50+ turns).Briefly touch the wire ends to a 1.5V AA battery and use the nail to pick up paperclips.]

SOCIAL SCIENCE

INSTRUCTION: -

- *ALL THE HOLIDAY HOMEWORK TO BE DONE IN SEPARTAE NOTEBOOK*.

DAY-1

1. How do we categorise natural resources? What are the implications of unsustainable use / over exploitation of natural resources?
2. When does Nature become a Resource?

DAY-2

1. Explore traditional practices that help the ecosystem to stay in balance?
2. Identify human actions in your surroundings that result in Nature losing her ability to restore and regenerate. What types of interventions can be undertaken to restore Nature's cycle.

DAY-3

1. What are the non-renewable resources that you use daily, directly or indirectly? What are the possible renewable substitutes? What are some of the steps we can take to transition to renewables?
2. Draw the thematic map of India depicting Distribution of important minerals.

DAY-4

1. Select any two natural resources. Gather information about their availability across different parts of India. Mark them on a map. What do you observe about their distribution? What are the types of economic activities connected with them?
2. What do you think are the different inputs required to enable the use of the natural resources available in different geographical areas?

DAY-5

1. Draw the Depth to Water Level Map of Punjab State & Chandigarh (U.T.) and write your observation on overuse of natural resources leads to what all consequences.
2. What do you understand by Responsible and judicious use of resources? Write a paragraph with examples in support of your understanding.

DAY-6

1. Name five ecosystem functions that serve humans.
2. Identify cultural practices in your home and neighbourhood that point to mindfulness in the use of natural resources.
3. What are some considerations to keep in mind in the production of goods for our current use?

DAY-7 AND 8

"Mighty Maratha Women" Biographies

The chapter highlights two remarkable women who led the empire. Based on page 77 and 78, create a "Profile Card" for each:

- Tarabai: Describe her role as the "architect of northward Maratha expansion" and her military strategy against Aurangzeb.
- Ahilyabai Holkar: List her contributions to infrastructure (temples, wells, roads) and her promotion of the Maheshwar weaving industry.

DAY-9

Compare how Shivaji and later Marathas treated religious places and people of different faiths. What evidence from the chapter shows their approach to religious diversity. (refer chapter-3)

DAY-10

The "Century of Change" Timeline

Draw a creative timeline (it could be in the shape of a railway track or a winding river) in your notebook. Using the dates and events from the chapter ‘THE COLONIAL ERA IN INDIA’.

DAY-11

Why do you think was the term ‘Sepoy Mutiny’ rejected after Indian Independence? Write one paragraph explaining your reason. (refer chapter -4)

DAY-12 AND 13

Prepare a project on Rani Lakshmibai and Begum Hazart Mahal refer page no 111

DAY-14 AND 15

Poster campaign: “Why Every Vote Matters” – highlight inclusivity measures like home voting, braille ballots, wheelchair assistance. Do it on a A3 size paper.

DAY-16

Create a biographical gallery of five heroes from the 1857 Revolt. For each leader, mention the location of their participation and include their portrait as shown in the chapter.

DAY-17

Draw a small chart to show the process of how RTE became an act. What had been tabled in the Lok Sabha? (Refer page no 146)

DAY-18

What might happen if one of the organs—Legislature, Executive and Judiciary had all the power? How could it affect the rights of people? (refer chapter 6)

DAY-19

What is the role that the judiciary plays in Indian democracy? What would happen if we didn’t have an independent democracy?

DAY-20

A skill is something you learn and practice to get better. It helps you do things well, like playing a sport, creative writing, solving math problems, cooking or even communicating well with people. If you could learn one skill today, What would be it and why?

हिंदी

निर्देशः 1. निर्देशों को बहुत सावधानी से पढ़िए और उनका पालन कीजिए।

2. समस्त गृहकार्य सुलेख गोष्मावकाश, गृहकार्य–पुस्तिका (कॉपी) में प्रतिदिन उचित फार्मेट के साथ सम्पन्न करें।

दिवस

1. मनोरंजन व स्वाध्याय में सामंजस्य बैठाते हुए अपने लिए गृश्मावकाश की योजना बनाएँ।
2. पाठ–27 मुहावरे (1–20) याद करके कॉपी में लिखें।
3. मल्हार पुस्तक पृष्ठ सं. 12 'खादी गीत' कविता लिखें।
4. मल्हार पृष्ठ सं. 20 'मिलकर मिलान करें' कॉपी में हल करें।
5. कल्पना कीजिए कि आप उस घर में रहते हैं जहाँ चिड़िया अपना घर बना रही हैं। अपने घर में उन्हें देखकर आप क्या करते ?
6. मल्हार पृष्ठ सं. 26 'चिड़ियों का घोंसला' प्रश्न (क) कॉपी में बनाएँ।
7. मल्हार पृष्ठ सं. 29 'मित्रलाभ' से एक पेज सुलेख लिखें।
8. मल्हार पृष्ठ सं. 29 'मित्रलाभ' से एक पेज सुलेख लिखें।
9. मल्हार पृष्ठ सं. 30 'मित्रलाभ' से एक पेज सुलेख लिखें।
10. आपके सपनों का भारत कैसा होना चाहिए लिखिए।
11. मल्हार पृष्ठ सं. 30 'मित्रलाभ' से एक पेज सुलेख लिखें।
12. मल्हार पृष्ठ सं. 28 'झरोखे से' 'विश्व गौरैया दिवस' पर दिए गए निबंध को लिखें।
13. अनुच्छेद–लेखन पृश्ठ संख्या 243 क्रम सं. 4 'छात्रों में बढ़ती अनुशाासनहीनता' विशय पर अनुच्छेद लिखें।
14. अनुच्छेद–लेखन पृश्ठ संख्या 244 क्रम सं. 6 'विद्यार्थियों का दायित्व' विशय पर अनुच्छेद लिखें।
15. अनुच्छेद–लेखन पृश्ठ संख्या 245 क्रम सं. 8 'कर्तव्य पालन' विशय पर अनुच्छेद लिखें।
16. निम्नांकित विशय – (पृश्ठ सं. 214) पर संवाद लिखें।

    (क) दो वृद्धों की बात–चीत

    (ख) मोटर साइकिल सवार और पुलिस कर्मचारी की बातचीत
17. पठित पाठ का पुनारावृति अभ्यास करें।

English [Spell-O-Fun]

1	abecedarian	28	echelon	55	onomatopoeia
2	ambiguous	29	eclectic	56	operetta
3	anaesthesia	30	estrange	57	pejorative
4	apocryphal	31	fallacious	58	penumbra
5	arboreal	32	filibuster	59	perfunctory
6	assiduous	33	fortuitous	60	pertinacious
7	atrophy	34	gazetteer	61	piscatorial
8	attenuate	35	gazpacho	62	poultice
9	autonomous	36	gimmicky	63	preposterous
10	beguiling	37	ignominy	64	rampageous
11	belligerent	38	imperturbable	65	recalcitrant
12	belvedere	39	impetuous	66	relinquish
13	bravura	40	incongruous	67	rendezvous
14	bureaucratic	41	incredulously	68	resilient
15	cacophony	42	indomitable	69	restaurateur
16	cervine	43	intransigence	70	shofar
17	chiarocurist	44	largesse	71	spontaneous
18	coalition	45	logorrhea	72	surreptitiously
19	colloquial	46	malignant	73	tenuous
20	concierge	47	modicum	74	trichinosis
21	connotation	48	myrrh	75	troika
22	contemporaneous	49	narcissus	76	turducken
23	convalescent	50	neophyte	77	unconscionable
24	convivial	51	nunnery	78	vacuum
25	cumbrous	52	obeisance	79	vociferous
26	delineate	53	obstetrician	80	zoophyte
27	demenor	54	occurrence		

Hindi [Spell-O-Fun]

1	दिग्भ्रांत	26	संकल्पनाएँ	51	कंडक्टर
2	चक्रवर्ती	27	आष्टांगिक	52	दोषोद्घाटन
3	सिद्धार्थ	28	इन्द्रियजन्य	53	पर्दाफाश
4	प्रफुल्लित	29	भिक्षाओं	54	दरिद्रजनों
5	वृद्धावस्था	30	श्रद्धापूर्वक	55	मनीषियों
6	शुद्धोदन	31	पदार्थों	56	भ्रश्टाचार
7	तपस्वियों	32	सिद्धांतों	57	कादम्बिनी
8	आश्रमवासी	33	सद्व्यवहार	58	असंख्यक
9	अभिनिष्क्रमण	34	श्रावस्ती	59	दुहेली
10	अंतःपुर	35	महापरिनिर्वाण	60	तनख़्वाह
11	विधिपूर्वक	36	आधुनिकतम	61	धींगामुश्ती
12	आभायुक्त	37	साहित्य	62	ऐतिहासिक
13	भिक्षाटन	38	संस्कृत	63	प्रदर्शित
14	पुरूषार्थ	39	टेलीफोन	64	तकनीशियन
15	असंतोषजनक	40	दिग्गज	65	पार्श्वगायक
16	जीवनोद्देश्य	41	संन्यासी	66	मैजेस्टिक
17	शांतिप्रिय	42	प्रशस्तिपत्र	67	स्टंटमैन
18	अश्रुमुख	43	झोपड़पट्टियों	68	माइक्रोफोन
19	ब्राह्मणों	44	अर्थव्यवस्था	69	पुडुकोट्टई
20	साक्षात्कार	45	रेगिस्तान	70	फब्तियाँ
21	धर्मचक्र	46	लेटरबॉक्स	71	प्रशिक्षण
22	प्रवर्तन	47	अवांछित	72	आर्थिक
23	फलस्वरूप	48	प्रोमेथियस	73	प्रतिध्वनियाँ
24	दीर्घकाल	49	अंधश्रद्धा	74	अनाधिकारी
25	संन्यासी	50	ड्राइवर	75	जहाँगीर