

ASHOKA PUBLIC SCHOOL SARANGARH (C.G.)

SUMMER VACATION HOLIDAY HOMEWORK 2025-26

CLASS – X

SUBJECT	TEACHER'S NAME	CONTACT NO.	HOMEWORK
SCIENCE	A. BANJARA P. NAIK	93407066211	- Chemical reaction Balancing - Worksheet - Refraction and refraction
INFORMATION TECHNOLOGY	R. AJAY	9575654252	Revise these topics: - Basics of Information Technology - Internet Safety and Security - Digital Documentation (Word Processing) - Data Handling (Spreadsheets) Task: Prepare handwritten short notes (5–6 lines) on each topic above.
ENGLISH	K. K. PATEL	7987421564	Letter to Editor Porter making. [Terr. Attack] Enquiry & Order placing. Poetic devices.
SST	D. PATEL	7894654188	Make a chart about Money and its uses
HINDI	S. K. BHOI	7987239449	रोबानी 'मोमबत्ती विषय पर एक आकर्षक विज्ञापन बनाइए। * 'पर्यावरण प्रदूषण' विषय पर एक अनुच्छेद लिखिए। * 'राम' - लक्ष्मण परशुराम 'संवाद' 'पाठ' का प्रश्नोत्तर
MATHEMATICS	I. ALAM	8540098381	Refer Next Page

1. Prove that $3 + \sqrt{7}$ is an irrational number.
2. Prove that $2\sqrt{3} - 4$ is an irrational number.
3. Find the HCF & LCM of 306 & 54. Verify that $\text{HCF} \times \text{LCM} = \text{product of two numbers}$.
4. Find the LCM & HCF of 15, 18, 45 by the Prime factorisation method.
5. Explain why $3 \times 5 \times 7 + 7$ is composite no's
6. Show that $(12)^n$ cannot end with digit '0' or 5 for any natural number 'n'
7. Given that $\text{HCF}(306, 657) = 9$, find LCM of (306, 657)
8. Explain why $7 \times 11 \times 13 + 13$ & $7 \times 6 \times 5 \times 4 \times 3 \times 2 + 1$ are composite numbers
9. If α & β are the zeros of the quadratic polynomial $f(x) = kx^2 + 4x + 4$ such that $\alpha^2 + \beta^2 = 24$, find the value of 'k'.
10. Find the zeroes of the quadratic polynomial $6x^2 - 13x + 6$ and verify the relation b/w the zeroes and its co-efficient
11. Find the zeroes of the quadratic polynomial $4x^2 - 9$ and verify the relation between the zeroes and its co-efficient
12. Find a quadratic polynomial whose zeroes $3 + \sqrt{2}$ & $3 - \sqrt{2}$
13. If α & $\frac{1}{\alpha}$ are the zeroes of the polynomial $4x^2 - 2x + (k - 4)$, find the value of 'k'.

14. If α & β are the zeroes of the polynomial $x^2 - 5x + k$ such that $\alpha - \beta = 1$, find the value of k .

15. If α, β are the zeroes of the polynomial $25p^2 - 15p + 2$, find a quadratic polynomial whose zeroes are $\frac{1}{2\alpha}$ & $\frac{1}{2\beta}$.

16. If α & β are zeroes of the polynomial $x^2 - 2x - 8$, then form a quadratic polynomial whose zeroes are 2α & 2β .

17. If α & β are zeroes of the polynomial $x^2 - 2x - 8$, then form a quadratic polynomial whose zeroes are 3α & 3β .

18. If α, β are roots of the quadratic polynomial $p(x) = x^2 - (k-6)x + (2k+1)$, find value of k , if $\alpha + \beta = 2\beta$.

19. If α & β are zeroes of $x^2 - 4x + 1$, then $\frac{1}{\alpha} + \frac{1}{\beta} = 2\beta$.

20. If α, β are zeroes of polynomial $p(x) = x^2 + px + q$, then polynomial having $\frac{1}{2}$ & $\frac{1}{\beta}$ as its zeroes is: