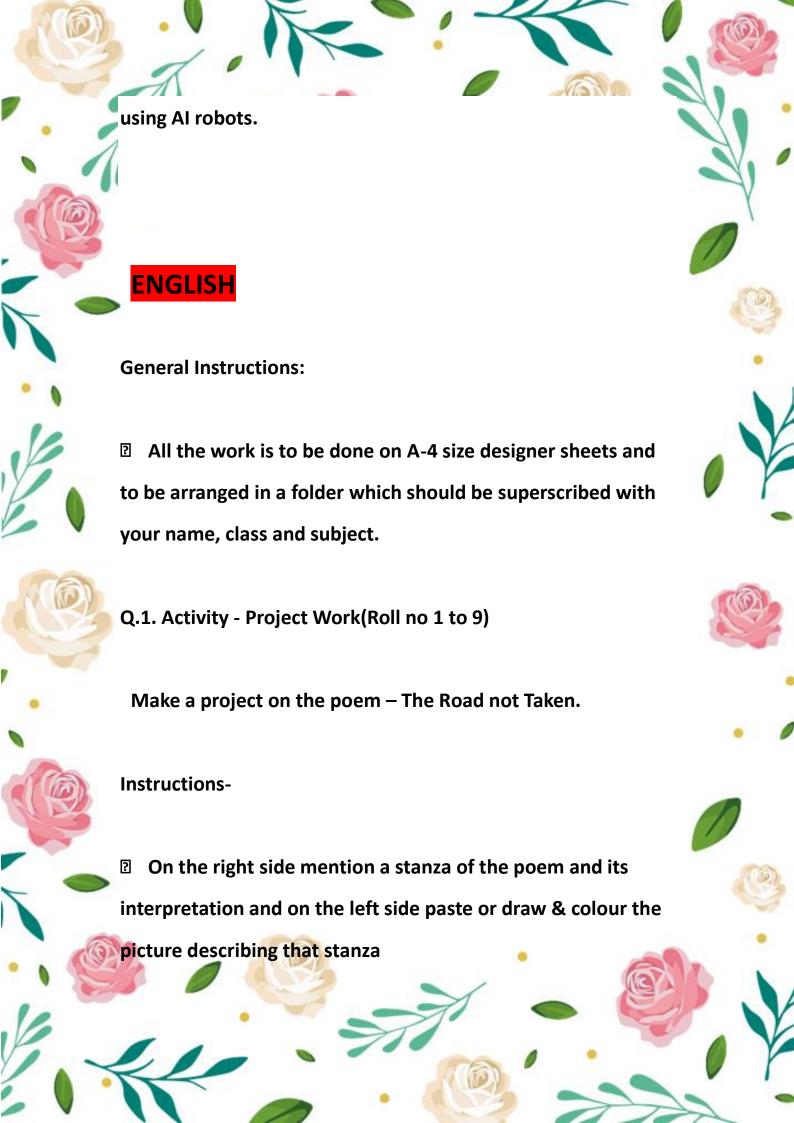
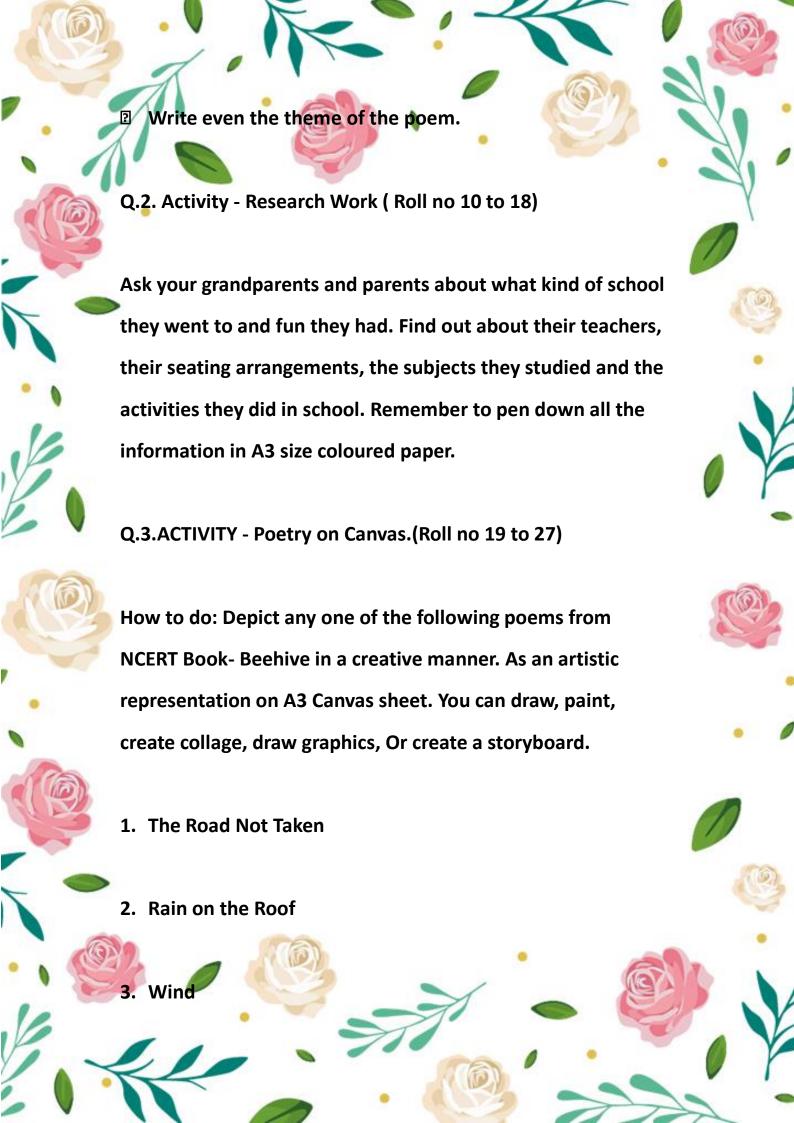


Worksheet 1. Simplify: $\frac{1}{1+x^{b-a}+x^{c-a}} + \frac{1}{1+x^{a-b}+x^{c-b}} + \frac{1$ $\frac{1}{1+x^{a-c}+x^{b-c}}$ 2. If $x = 7 + \sqrt{40}$, find the value of $\sqrt{x} + \frac{1}{\sqrt{x}}$ 3. Evaluate: $\left\{ \sqrt{5 + 2\sqrt{6}} + \sqrt{8 - 2\sqrt{15}} \right\}$ 4. Represent $\sqrt{10.5}$ on the number line. 5. Find the values of a and b: $\frac{5+\sqrt{3}}{7-4\sqrt{3}} - \frac{5+\sqrt{3}}{7+4\sqrt{3}} = a + \frac{5+\sqrt{3}}{7+4\sqrt{3}$ 6. If $a = \frac{2 - \sqrt{5}}{2 + \sqrt{5}}$ and $b = \frac{2 + \sqrt{5}}{2 - \sqrt{5}}$, find $a^2 - b^2$ 7. If $x = 2 + \sqrt{3}$, find the value of $x^2 + \frac{1}{x^2}$ 8. If $\frac{9^n \times 3^2 \times (3^{-n/2})^{-2} - 27^n}{3^{3m} \times 2^3} = \frac{1}{27}$, prove that m - n = 19. If $p(x) = 5x - 4x^2 + 3$, find p(-2), p(-1), p(1) and p(2). 10. If $x = -\frac{1}{2}$ is a zero of the polynomial, $p(x) = 8x^3$ k, find the value of k. 11. Determine whether (3x - 2) is a factor of $3x^3 + x^2 -$ 20x + 12. 12. If (x-3) and $(x-\frac{1}{3})$ are both factors of $ax^2 + 5x +$ b, show that a = b. **Artificial Intelligence Instructions:**







Parameters for Assessment: Relevance to content, creativity and presentation. Q.4.ACTIVITY - Design your own newspaper on the theme G-20.(Roll no 28 to 36) 1. How to do: The newspaper should have four sections. Current Affairs (G20), Editorial page, Entertainment page, **Education page, Sports page** 2. Make it interesting and engaging by adding the following: Games & Puzzle- based on tenses, verbs, prepositions or conjunctions. (Any one) For example Snakes & Ladders on prepositions, sudoku, crossword puzzles, riddles, etc. Where to do: A3 Size sheets (5 pages) Parameters for Assessment Quality of content, originality and Presentation

