

Assignments for Class IX

| S.No. | SUBJECT | ASSIGNMENTS |
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| 1 | English Language | Practice Test Papers 2 and 3 from the Total English (Part 1) book. |
| 2 | Physics | 1) Draw ray diagrams of the images formed by a concave mirror when the object is placed : a) Between C and F b) Between O and f c) At C d) Beyond C 2) Read chapter : 1 (Measurements and Experimentation) from concise physics. |
| 3 | Chemistry | To read : Chapter 1 Language of Chemistry Chapter 2 Chemical changes and reactions |
| 4 | Biology | Chapter 2 (Cell – The Unit Of Life) and Chapter 18 (Health Organisations) to be read and practice the following diagrams from chapter 2. Diagram of Animal cell and Diagram of Plant cell |
| 5 | History | 1. READ CHAPTER: HARAPPAN CIVILISATION 2. READ CHAPTER: OUR CONSTITUTION |
| 6 | Geography | Do the following two topics in one project file. (a) Uses of important types of maps. (b) Draw and colour the forms of important contours viz. V-shaped valleys, ridges, concave slopes, convex slope, conical hill, plateau, gentle and steep slope (escarpment) and Cliff (sea cliff). (pg 236-243 in your text book). |
| 7 | Bengali | প্রকল্প: ‘আজ থেকে পনেরো বছর পর ভূমি কীভাবে নিজেকে দেখতে চাও’। - তোমার সুনিশ্চিত মতামত সহ প্রকল্পটি রচনা কর। |
| 8 | Hindi | विलोम, मुहावरें, अशुद्ध शब्दों को शुद्ध करो याद करें। |
| 9 | Mathematics | <ol style="list-style-type: none"> If $2x - \frac{1}{2x} = 1$, find (i) $2x + \frac{1}{2x}$ (ii) $4x^2 + \frac{1}{4x^2}$ and (iii) $16x^3 + \frac{1}{16x^3}$. If $a+b+c = 15$ and $ab+bc+ca = 50$ find $a^2+b^2+c^2$. If $3x - 2y = 4$ and $xy = 5$, find the value of $27x^3 - 8y^3$. If $x - \frac{1}{x} = 2$, find the value of $x^3 - \frac{1}{x^3}$. Simplify the expression $\sqrt[3]{\frac{125x^3}{216}} \times \left(\frac{5x}{3}\right)^{-2}$. Prove that $\left(\frac{x^a}{x^b}\right)\left(\frac{x^b}{x^c}\right)\left(\frac{x^c}{x^a}\right)$. Find $(9m^2 - 11n^2)(13m^2 + 5n^2)$. Factorise: <ol style="list-style-type: none"> $5xy^2 - 5y^2 - 3a = 3ax$ $2mn^2p - 2m + 2n^3p - 2n - n^2p^2 + p$ $4(x+y)^3 - 25(x+y)$ $x^8 - y^8$ $12a^2 - 19ab + 7b^2$ $x^2y - x + 3xy + 3$ $a^2 - b^2 - 2b - 1$ $x^2 + 3x + 2$ $5(x+y)^2 + 6(x+y) + 1$ $3x^2 - 7x - 6$ |

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| | | <p>9. Simplify : $\frac{x^2+7x+12}{x^2-25} \div \frac{x^2+9x+18}{x^2-7x+10}$.</p> <p>10. If $p = x+1$ and $\frac{4p-3}{2} - \frac{3x+2}{5} = \frac{3}{2}$.</p> <p>11. Solve $\frac{x+1}{x-1} = \frac{2x+3}{2x-5}$.</p> <p>12. Solve $\frac{3x-7}{x-4} + \frac{2x+5}{x+2} = 5$.</p> <p>13. A bag contains 10 paise, 25 paise and 50 paise coins. The number of 25 paise coins is three the number of 10 paise coins. If 50 paise coins are 5 more than 25 paise coins and the value of money in the bag is Rs 120, find the number of 10 paise coins.</p> <p>14. The digits of a two digit number differ by 3. If the digits are interchanged and the resulting number is added to the original number, we get 143. What can be the original number.</p> <p>15. A streamer goes downstream and covers the distance between two parts in 5 hours while it covers the same distance upstream in 6 hours. If the speed of the stream is 1 km/h, find the speed of the streamer in still water and the distance between two parts.</p> <p>16. Solve the following inequations: (i) $2x - 3 < x + 2, x \in \mathbb{N}$ (ii) $3[4(n-2) - (1-n)] \leq n+1, n \in \mathbb{W}$ (iii) $-4 \leq -2(x+8) < 8, x \in \mathbb{R}$ (iv) $5(x-2) > 9x - 3(2x-4), x \in \mathbb{N}$ Represent the solutions set graphically.</p> <p>17. A hall 8 m long, 6m wide and 4m high has three doors of size 1.5m by 2m and four windows of size 1.2m by 1m. Find the cost of papering the walls if the wall paper is 8cm wide and costs Rs7 per meter.</p> <p>18. Find the volume of wood required to make an open box of internal dimensions 20cm by 12.5cm by 9.5cm, the wood being 1.5cm thick.</p> <p>19. A solid right circular cylinder of height 1.21m and diameter 28cm is melted and recast into 7 equal solid cubes. Find the edge of each cube.</p> <p>20. The ages of Sona and Sonali are in the ratio 5:3. Five years hence, the ratio of their ages will be 10:7. Find their present ages.</p> <p>21. If each side of a triangle is increased by 4 cm, the ratio of the perimeters of the new triangle and the given triangle is 7:5. Find the perimeter of the given triangle.</p> <p>22. The two perpendicular sides of a right angled triangle are in the ratio 3:4 and its perimeter is 96cm. Find three sides.</p> <p>23. Find two consecutive even integers such the two-fifth of the smaller exceeds two eleventh of the larger by 4.</p> <p>24. What sum of money will amount to Rs 3630 in two years at 10% per annum compound interest.</p> <p>25. In how many years will Rs 4000 amount to Rs 5324 at 10% compound interest.</p> |
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