## $\mathrm{A}_{\text {nand }} \mathrm{N}_{\text {iketan }}$ <br> Maninagar Campus

| Grade : IX | Subject : Mathematics | Date : 28/06/2019 |
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| Name : | Practice Worksheet - I | Chapter No. 1, 2,3 |

1. Write a rational number having terminating decimal expansion .
2. How many rational numbers can be found between two distinct rationalnumbers?
3. Find the value of $(2+\sqrt{3})(2-\sqrt{3})$
4. Evaluate : $\left(27^{-2 / 3}\right.$
5. Find the two rational numbers between $\frac{1}{2}$ and $\frac{1}{3}$.
6. Find two irrational numbers between 2 and 3 .
7. Express $0.8888 \ldots$ in the form $\mathrm{p} / \mathrm{q}$.
8. Visualize 3.76 on the number line using successive magnification.
9. Represent $\sqrt{3}$ on number line.
10. Simplify by rationalizing denominator : $\frac{(5+\sqrt{3})}{(5-\sqrt{3})}$
11. Express 2.4178 in the form $\frac{p}{q}$.
12. Find the value of $K$ it $x-2$ is factor of $4 x^{3}+3 x^{2}-4 x+K$
13. Without actually Calculating the cubes, find the value of $(-12)^{3}+(7)^{3+}(5)^{3}$
14. Factorise $27 x^{3}+y^{3}+z^{3}-9 x y z$
15. Evaluate $105 \times 95$
16. Using factor theorem check whether $\mathrm{g}(\mathrm{x})$ is factor of $\mathrm{p}(\mathrm{x})$ if $\mathrm{p}(\mathrm{x})=x^{3}-4 x^{2}+x+6$ and $\mathrm{g}(\mathrm{x})=\mathrm{x}-3$
17. Factorise: $8 a^{3}-b^{3}-12 a^{2} b+6 a b^{2}$
18. Show that 5 is a zero of polynomial $2 x^{3}-7 x^{2}-16 x+5$
19. Find the remainder when polynomial $\mathrm{x}^{3}+3 \mathrm{x}^{2}+3 \mathrm{x}+1$ is divided by $\mathrm{x}+1$.
20. Divide $f(x)$ by $g(x) \&$ verify that the remainder $f(x)=x^{3}+4 x^{2}-3 x-10, g(x)=x+4$
21. Factorise: $x^{6}-64$
22. Locate the points $(5,0),(0,5),(2,5),(5,2),(-3,5),(-3,-5)$ and $(6,1)$ in the Cartesian plane.
23. Draw a triangle ABC with $\mathrm{A}(3,0), \mathrm{B}(-2,1), \mathrm{C}(2,1)$ on the Cartesian plane. Also, find its area.
24. In which quadrant or on which axis do each of the points $(-2,4),(2,-1),(-1,0),(1,2)$ and $(-3,-5)$ lie? Verify your answer by locating them on the Cartesian plane.
25. Locate the points (A) $(-3,4)(B)(3,4)$ and $(C)(0,0)$ in a Cartesian plane write the name of figure which is formed by joining them.
26. See fig. and write the following:

(i) The Co-ordinates of B
(ii) The Co-ordinates of C
(iii) On which axes point L lies.
(iv) The abscissa of the point D
(v) The Co-ordinates of point L
(vi) In which axes point M lies.
(vii) The ordinate of the point H
(viii) The Co-ordinates of the point M
(ix) The point identified by the Co-ordinate ( $2,-4$ )
(x) The point identify by the Co-ordinates $(-3,-5)$
